DOCUMENT RESUME

ED 113 545 CE 005 083

TITLE Mechanisms for Aiding Worker Adjustment to Technological Change: Volume 2: Concepts, Review of the Literature, Abstracts.
INSTITUTION Utah Univ., Salt Lake City. Human Resources Inst.
SPONS AGENCY National Science Foundation, Washington, D.C. Office of National Research and Development Assessment.
NOTE 444p.; For volume 1, see CE 005 082; For a commentary on implications, see CE 005 084

EDRS PRICE MF-$0.76 HC-$22.21 Plus Postage
DESCRIPTORS *Abstracts; *Annotated Bibliographies; Government Role; Methods; Private Agencies; *State of the Art Reviews; *Technological Advancement; *Vocational Adjustment; Work Attitudes

ABSTRACT

Volume 2, which accompanies "Mechanisms for Aiding Worker Adjustment to Technological Change, Volume 1," consists of a key word index for locating specific topics and the abstracts of literature reviewed in Volume 1. Key words, referring to aspects of worker adjustment to technological change appearing in the abstracted literature, are grouped into four main areas: scope, level, and content; private adjustment mechanisms; public adjustment mechanisms; and methodology. For each article included, the title, author, publisher, and key words assigned are cited. Not all the articles are abstracted. (EA)

****
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. Nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
****

OCT 2 1975

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

MECHANISMS FOR AIDING WORKER ADJUSTMENT TO TECHNOLOGICAL CHANGE

Concepts, Review of the Literature, Abstracts

VOLUME II

Key Word Index and Abstracts

ED113545

CE005083

Human Resources Institute
University of Utah

2/3

KEY WORD INDEX

The following is an index to the key words listed in each entry of the annotated bibliography. The key words refer to aspects of worker adjustment to technological change appearing in the abstracted or reviewed articles. They are grouped into four main areas - scope, level, and content; private adjustment mechanisms; public adjustment mechanisms; and, methodology. The index is for the purpose of providing the reader with access to specific topics in which he may be interested.

The numbers following each entry in the index refer to the number of the article which contains information about that subject. The two digits to the left of the colon, e.g. 72:x.xx, indicate the year of publication. The articles are listed by year of publication, most recent first. The last three or four digits of the number, e.g. xx:10.50, indicate the position of the article in alphabetical order. Thus, abstract number 72:10.50 will be found with the 1972 articles and will be located by going through the abstracts, beginning with 72:1.00, until 72:10.50 is reached.

administrators
  see WHITE COLLAR WORKERS

adult education
  see EDUCATION

ADVANCE NOTIFICATION
  72:15.00   71:6.25, 71:9.00   70:6.00, 70:9.00, 70:9.50, 70:17.85
  69:9.50, 69:14.00, 69:25.00, 69:26.00, 69:29.00, 69:31.00   68:1.00
  67:14.00, 67:17.00, 67:20.00   66:0.50, 66:41.00, 66:62.00   65:6.50,
  65:20.60, 65:22.00   64:19.00   63:1.00, 63:4.00, 63:5.00, 63:19.00

AEROSPACE INDUSTRY
  69:12.00, 69:27.00   66:13.00   61:1.00

AGE GROUPS
  70:10.00   68:15.00, 68:18.00, 68:19.00   67:1.00, 67:4.00, 67:9.00

aggregate demand
  see FULL EMPLOYMENT

AGRICULTURE
  72:9.00, 72:11.00   70:13.40, 70:14.00, 70:17.50, 70:17.90, 70:19.00
  69:2.50, 69:8.00, 69:23.50   68:17.00, 68:18.00   67:1.00, 67:4.00
  67:8.25   66:1.00, 66:18.00, 66:25.00
  see also specific crop, e.g. COTTON INDUSTRY, LETTUCE INDUSTRY

aircraft and parts industry
  see AEROSPACE INDUSTRY

AIRLINE INDUSTRY
  71:4.25   70:9.00   69:20.00   65:3.00   64:8.50   62:2.00

AIRLINE PILOTS
  65:16.00

ALIENATION OF WORKERS
  72:6.00, 72:13.00, 72:20.00   71:3.10, 71:8.50   67:8.00   66:39.00
  66:52.00   65:6.00

APPAREL MANUFACTURING
  73:2.00

APPRENTICESHIP
  73:0.75   71:4.90, 71:5.00, 71:6.25   69:26.00, 69:35.00   67:11.00
  66:6.00, 66:7.00, 66:12.00, 66:32.00, 66:48.00   65:4.00   64:3.00,
  64:11.00, 64:16.00, 64:26.00

arbitration
  see COLLECTIVE BARGAINING
    MEDIATOR

Area Redevelopment Act
  see URBAN-REGIONAL POLICY

ARIZONA
  65:13.00

ARMOUR AND COMPANY
  69:31.00, 69:33.00   66:46.00   64:29.00   63:19.00

ASIA
  72:11.00

ATTRITION
  73:0.25, 73:3.00   72:2.00, 72:4.00, 72:15.00   71:3.00, 71:3.50,
  71:6.50, 71:7.00   70:3.00, 70:6.50, 70:11.00, 70:15.00, 70:16.00,
  70:17.85, 70:19.00   69:14.00, 69:29.00   68:4.50, 68:15.00, 68:19.00,
  68:20.00   67:2.50, 67:4.00, 67:6.00, 67:8.00, 67:12.50, 67:14.00,
  67:22.50   66:0.50, 66:6.00, 66:7.00, 66:12.00, 66:29.00, 66:32.00,
  66:41.00, 66:45.00, 66:63.00   65:0.50, 65:3.00, 65:4.00, 65:5.50,
  65:5.70, 65:6.30, 65:6.50, 65:14.00, 65:18.00, 65:19.75, 65:20.50,
  65:21.00, 65:23.00   64:3.00, 64:6.00, 64:7.00, 64:8.00, 64:8.50,
  64:10.00, 64:13.00, 64:19.00, 64:25.00, 64:27.00   63:4.00, 63:7.00,
  63:9.00, 63:17.00, 63:18.00

AUSTRALIA
  69:0.75   67:22.50

AUSTRIA
  67:2.50

AUTOMATION FUND
  70:0.25   69:33.00   66:12.00   61:1.00
  see also PAY INCENTIVES
    S.U.B.
    SEVERANCE PAY

AUTOMOBILE INDUSTRY
  72:6.00, 72:6.50   70:1.00, 70:8.00, 70:9.00, 70:14.00, 70:19.00
  69:2.00   68:15.00, 68:17.00   65:11.50   64:8.50   63:9.00
  62:1.00   61:1.00

BAKING INDUSTRY
65:10.25 64:20.00

BANKING
73:2.00 70:19.00 68:17.00 67:8.00, 67:22.50 66:13.00, 66:26.00, 66:37.00

BELGIUM
69:10.25 66:25.00

BLACKS
73:2.00 72:1.75 71:5.00, 71:8.25 70:17.85, 70:20.00 69:26.00 68:2.00, 68:4.00, 68:6.00, 68:21.00 66:5.00, 66:21.00, 66:32.00, 66:46.00, 66:48.00 65:13.00 64:29.00 63:7.00

BLUE COLLAR (WORKERS)
73:3.00 72:22.00 71:7.00, 71:8.25, 71:8.50 70:1.00, 70:1.50, 70:8.00, 70:9.00, 70:15.00 69:28.00, 69:30.50 68:10.00, 68:14.00, 68:15.00, 68:17.00, 68:19.25 67:4.00, 67:10.00 65:10.50 64:11.00 63:16.00

BLUE COLLAR-WHITE COLLAR
73:3.00 72:10.00, 72:15.00 71:1.00, 71:4.60, 71:4.90 70:1.00, 70:3.00, 70:8.00, 70:9.00, 70:15.00, 70:17.00, 70:19.00 69:27.00 68:15.00, 68:19.00 67:9.00, 67:10.00, 67:13.00, 67:23.00, 67:25.00 66:10.00, 66:17.00, 66:27.50, 66:32.00, 66:48.00, 66:50.00, 66:52.00, 66:56.00 65:0.50, 65:10.40 64:2.00, 64:8.00, 64:11.00, 64:12.00, 64:19.00, 64:19.50, 64:25.00, 64:34.25, 64:35.00 63:8.00, 63:15.00, 63:17.00

CALIFORNIA
69:27.00 65:4.00 64:6.00

CANADA
72:6.25 70:18.50 69:2.00 68:1.00, 68:15.90 67:2.00, 67:2.50, 67:5.00, 67:7.00, 67:7.50, 67:19.00, 67:22.50 66:63.00 65:20.50

capital accumulation
see ECONOMIC GROWTH

CAPITAL GOODS INDUSTRIES
69:24.00

CAPITAL-LABOR RATIO
72:9.00 70:3.65 69:4.50, 69:17.00, 69:24.00 67:25.00 65:19.50 63:3.00

CAPITAL TAXATION
70:3.50 66:64.00

CAPITALISM
  69:22.00

CASE STUDY(IES)
  73:0.25, 73:2.00   72:1.00, 72:2.00, 72:6.25, 72:12.00, 72:16.00, 72:18.00, 72:21.00   71:0.50, 71:2.00, 71:2.40, 71:3.00, 71:4.00   70:0.25, 70:0.75, 70:3.00, 70:3.50, 70:6.00, 70:8.00, 70:9.40, 70:11.00, 70:13.40, 70:13.90, 70:14.00, 70:19.00   69:0.75, 69:2.00, 69:4.00, 69:8.00, 69:8.50, 69:10.00, 69:10.25, 69:21.00, 69:30.00, 69:31.00, 69:33.00   68:0.50, 68:0.75, 68:4.50, 68:8.00, 68:14.00, 68:15.00, 68:15.90, 68:17.00, 68:19.00   67:2.50, 67:5.00, 67:8.00, 67:16.00, 67:17.00, 67:18.00   66:12.00, 66:13.00, 66:17.00, 66:22.00, 66:23.50, 66:26.00, 66:27.00, 66:28.00, 66:35.00, 66:37.00, 66:45.00, 66:46.00, 66:52.00, 66:54.00, 66:58.00, 66:62.00   65:0.50, 65:0.75, 65:1.00, 65:2.00, 65:3.00, 65:4.00, 65:5.10, 65:5.20, 65:5.30, 65:5.50, 65:9.00, 65:10.25, 65:10.50, 65:10.75, 65:11.50, 65:13.00, 65:20.60   64:3.00, 64:12.50, 64:16.00, 64:20.00, 64:29.00, 64:34.50   63:4.00, 63:5.00, 63:6.50, 63:7.00, 63:18.00, 63:18.50, 63:19.00   62:1.00   61:1.00

CHEMICAL INDUSTRY
  70:1.00,   68:15.00, 68:17.00   64:8.50

child care
  see DAY CARE

CHILI
  72:6.00

CITRUS INDUSTRY
  65:13.00

classroom training
  see RETRAINING, PRIVATE

CLERICAL WORKERS
  71:7.25   67:22.50   66:37.00

clothing industry
  see APPAREL MANUFACTURING

COAL MINERS
  69:16.00   64:10.00

COAL MINING INDUSTRY
  70:0.50   68:15.00, 68:17.00   67:9.00

COLLECTIVE BARGAINING
72:1.00, 72:1.60, 72:2.00, 72:4.00, 72:6.25, 72:6.50, 72:12.00, 72:13.00, 72:15.00, 72:16.00, 72:18.00, 72:19.00, 72:22.00 71:0.50, 71:3.00, 71:3.50, 71:4.00, 71:4.25, 71:4.70, 71:4.75, 71:6.25, 71:6.30, 71:6.50, 71:8.25, 71:9.00 70:0.50, 70:3.00, 70:3.50, 70:3.55, 70:3.75, 70:8.00, 70:9.00, 70:11.70, 70:12.00, 70:13.90, 70:16.00, 70:17.00, 70:17.20, 70:18.50 69:2.00, 69:9.50, 69:10.00, 69:10.40, 69:12.00, 69:14.00, 69:20.00, 69:25.00, 69:28.00 68:1.00, 68:2.00, 68:5.00, 68:7.00, 68:15.00, 68:15.90, 68:17.00, 68:19.00, 68:20.00 67:1.00, 67:1.30, 67:7.00, 67:7.50, 67:9.00, 67:11.00, 67:12.50, 67:12.75, 67:19.00 66:12.00, 66:17.00, 66:22.00, 66:28.00, 66:32.00, 66:33.00, 66:35.00, 66:41.00, 66:50.00, 66:51.00, 66:57.00, 66:63.00 65:0.20, 65:0.50, 65:3.00, 65:5.30, 65:6.30, 65:9.40, 65:11.00, 65:11.50. 65:14.00, 65:16.00, 65:19.50, 65:20.00, 65:21.00, 65:21.30, 65:21.60, 65:22.00 64:2.00, 64:3.00, 64:7.00, 64:8.50, 64:19.00, 64:31.00, 64:34.00, 64:34.25, 64:35.00 63:1.00, 63:8.00, 63:9.00, 63:12.00, 63:15.00, 63:15.50, 63:16.00, 63:18.00, 63:18.50, 63:19.00 62:2.00 61:1.00
see also LABOR-MANAGEMENT
PUBLIC REPRESENTATION IN BARGAINING
WORK RULES

COLLECTIVES
70:11.40

college professors
see EDUCATORS

COLORADO
65:1.00

COLUMBIA
72:5.50

commercial airlines
see AIRLINE INDUSTRY

COMMUNICATION WORKERS OF AMERICA
64:34.25

COMMUNITY COOPERATION
72:1.50 70:17.85

compensation
see PAY INCENTIVES

COMPULSARY BARGAINING
71:6.50 65:5.30

COMPUTER INDUSTRY
71:3.25 64:9.00

COMPUTER PROGRAMMERS
71:3.25 66:37.00

COMPUTERS
70:6.00, 70:18.00 66:60.00

CONSTRUCTION INDUSTRY
72:19.00 69:35.00 68:18.00 66:25.00
see also PREFABRICATED HOUSING

CORRELATION
72:20.00 69:4.50, 69:21.00, 69:23.00 67:8.00 66:13.00
65:6.00, 65:7.00, 65:13.00

COTTON INDUSTRY
65:13.00

COUNSELING, PRIVATE
71:2.00, 71:3.10 70:2.00 69:8.50, 69:31.00, 69:33.00 64:32.50
63:5.00, 63:6.50, 63:19.00

COUNSELING, PUBLIC
71:3.10 70:3.65, 70:9.30 69:8.50, 69:31.00 68:4.50 67:1.00,
67:2.00, 67:4.00, 67:6.00, 67:14.00, 67:23.00 66:6.00, 66:7.00, 66:12.00,
66:20.00, 66:33.00, 66:41.00, 66:48.00, 66:61.00 65:4.00, 65:6.50,
65:9.30, 65:9.60, 65:10.00, 65:10.40, 65:17.00 64:6.00, 64:12.50,
64:19.00, 64:26.50 63:14.00, 63:19.00

covariance analysis
see VARIANCE-COVARIANCE ANALYSIS

CZECHOSLOVAKIA
69:10.25 68:18.00

DAY CARE
72:1.50, 72:10.00 71:3.10

DISADVANTAGED WORKERS
71:5.00 70:7.50 66:25.00
see also HANDICAPPED WORKERS
LOW SKILLED WORKERS
MINORITY GROUP WORKERS

DISCRIMINATION
71:3.10 66:48.00

displaced workers
see UNEMPLOYMENT

displacement allowances
see SEVERANCE PAY

DISTRIBUTION OF INCOME
70:3.50, 70:20.00
see also INCOME REDISTRIBUTION

dock workers
see LONGSHOREMEN

docks
see LONGSHOREMEN
SHIPPING INDUSTRY

dropouts
see DISADVANTAGED WORKERS

EARLY RETIREMENT
72:2.00, 72:4.00, 72:15.00 71:3.50 70:0.10, 70:3.00, 70:6.50, 70:8.00, 70:9.00, 70:9.50, 70:16.00, 70:17.00, 70:17.20, 70:19.50 69:14.00, 69:25.00, 69:33.00 68:4.50, 68:5.00, 68:15.00, 68:15.90, 68:20.00 67:1.30, 67:2.50, 67:6.00, 67:7.00, 67:16.00, 67:17.00, 67:19.00 66:0.50, 66:3.00, 66:6.00, 66:7.00, 66:12.00, 66:20.00, 66:23.00, 66:32.00, 66:38.00, 66:51.00, 66:56.00, 66:63.00 65:0.50, 65:1.00, 65:3.00, 65:4.00, 65:5.70, 65:6.30, 65:9.40, 65:11.00, 65:11.50, 65:21.30 64:3.00, 64:6.00, 64:8.00, 64:8.50, 64:10.00, 64:13.00, 64:27.00, 64:30.00 63:4.00, 63:9.00, 63:18.00 61:1.00

EARNINGS, WORKER
72:3.00, 72:10.00 71:3.10 70:8.00, 70:11.00, 70:15.00, 70:16.00, 70:19.50 69:10.00, 69:23.00 68:17.00. 68:18.00, 68:19.00 67:1.00, 67:4.00, 67:7.00, 67:10.00, 67:12.75, 67:24.00 66:22.00 64:8.50 62:1.00

EASTERN EUROPE
72:8.00
see also EUROPE

EASTERN UNITED STATES
63:6.50

ECONOMIC GROWTH
72:11.00 70:17.55, 70:19.00 68:19.00 67:12.00 66:16.00, 66:35.00, 66:41.00, 66:45.00, 66:56.00 65:3.00 64:8.00
see also FULL EMPLOYMENT

EDUCATION
73:0.75, 73:1.00   72:14.00   71:1.00, 71:3.10, 71:4.90, 71:5.00, 71:7.00
70:2.00, 70:3.55, 70:3.60, 70:3.65, 70:7.50, 70:8.00, 70:9.30, 70:10.00,
70:14.00, 70:17.00, 70:17.85, 70:17.90, 70:19.00   69:2.50, 69:5.50,
69:6.50, 69:23.00, 69:26.00, 69:30.50, 69:33.00   68:0.50, 68:9.00, 68:10.00,
68:14.00, 68:15.00, 68:18.00, 68:19.50   67:1.00, 67:1.30, 67:4.00, 67:10.00,
67:13.00, 67:24.00   66:6.00, 66:7.00, 66:9.00, 66:12.00, 66:16.00, 66:17.00,
66:20.00, 66:23.00, 66:30.00, 66:31.00, 66:33.00, 66:34.00, 66:35.00,
66:40.00, 66:41.00, 66:42.00, 66:45.00, 66:47.00, 66:48.00, 66:49.00,
66:51.00, 66:54.00, 66:59.00, 66:61.00, 66:62.00   65:1.00, 65:4.00,
65:5.00, 65:6.50, 65:6.60, 65:9.30, 65:9.60, 65:10.00, 65:11.00, 65:11.50,
65:13.00, 65:17.00, 65:18.00, 65:18.50, 65:20.50, 65:23.00   64:1.00,
64:2.00, 64:6.00, 64:9.00, 64:10.00, 64:12.00, 64:12.50, 64:13.00, 64:14.00,
64:17.00, 64:18.00, 64:19.00, 64:19.50, 64:21.00, 64:23.00, 64:27.00,
64:27.50, 64:32.50   63:2.00, 63:11.00, 63:19.00

EDUCATION REQUIREMENTS
72:10.00   70:1.00, 70:2.00, 70:6.00, 70:10.00, 70:17.90   69:5.50,
69:13.00, 69:18.00, 69:23.00, 69:27.00   68:14.00, 68:15.00, 68:19.00
67:1.00, 67:9.00, 67:10.00, 67:18.00   66:17.00, 66:24.00, 66:30.00
64:12.50, 64:15.00, 64:18.00, 64:27.50, 64:29.00
see also HIGH EDUCATED WORKERS
LOW EDUCATED WORKERS

EDUCATORS
71:4.50

elasticity of substitution
see CAPITAL-LABOR RATIO

electric and gas utility
see PUBLIC UTILITIES

electric light and power company
see PUBLIC UTILITIES

ELECTRICIANS
64:16.00

ELECTRONICS INDUSTRY (includes electrical industry)
71:8.00   64:9.00   61:1.00

EMPIRICAL
73:2.00, 73:3.00   72:2.00, 72:5.50, 72:6.00, 72:6.50, 72:9.00, 72:11.00,
72:12.00, 72:14.00, 72:17.00, 72:18.00, 72:20.00   71:3.00, 71:3.50, 71:4.00,
71:4.25, 71:4.50, 71:4.75, 71:6.25, 71:6.50, 71:7.00, 71:8.50   70:0.10,
70:0.50, 70:1.00, 70:3.65, 70:3.75, 70:6.00, 70:8.00, 70:9.30, 70:9.40,
70:11.00, 70:13.00, 70:13.40, 70:14.00, 70:15.00, 70:17.55, 70:17.60, 70:17.85,
70:17.90, 70:19.00, 70:19.50, 70:20.00   69:0.75, 69:2.50, 69:4.50, 69:5.50
69:7.00, 69:8.00, 69:10.00, 69:10.25, 69:16.00, 69:17.00, 69:21.00, 69:23.00,
69:23.50, 69:24.00, 69:27.00, 69:31   68:2.00, 68:4.00, 68:6.00, 68:8.00,

EMPIRICAL (cont.)
68:9.00, 68:13.00, 68:14.00, 68:17.00, 68:18.00, 68:19.00 67:2.50, 67:4.00, 67:5.00, 67:8.00, 67:8.25, 67:9.00, 67:10.00, 67:12.75, 67:14.00, 67:16.00, 67:18.00, 67:19.00, 67:22.00, 67:22.50, 67:25.00 66:1.00, 66:6.00, 66:7.00, 66:9.00, 66:12.00, 66:13.00, 66:14.00, 66:18.00, 66:21.00, 66:23.00, 66:23.50, 66:24.00, 66:25.00, 66:27.00, 66:28.00, 66:33.00, 66:41.00, 66:45.00, 66:51.00, 66:52.00, 66:54.00, 66:56.00, 66:57.00, 66:58.00, 66:60.00, 66:62.00 65:0.50, 65:1.00, 65:3.00, 65:5.00, 65:5.10, 65:5.30, 65:5.70, 65:6.00, 65:7.00, 65:10.25, 65:10.75, 65:11.50, 65:13.00, 65:19.00, 65:19.75, 65:20.60, 65:22.00, 65:23.00 64:6.00, 64:9.00, 64:12.00, 64:16.00, 64:17.00, 64:20.00, 64:25.00, 64:29.00, 64:34.50 63:3.00, 63:4.00, 63:5.00, 63:5.50, 63:6.00, 63:7.00, 63:18.00, 63:19.00 62:1.00 61:1.00
see also specific type of analysis, e.g. REGRESSION, SAMPLE, CORRELATION

EMPLOYMENT
73:0.25, 73:0.75, 73:3.00 72:1.50, 72:2.00, 72:4.00, 72:5.75, 72:9.00, 72:10.00 71:3.00, 71:3.25, 71:4.60, 71:6.25, 71:7.00 70:0.25, 70:3.00, 70:6.00, 70:8.00, 70:9.00, 70:10.00, 70:11.00, 70:12.00, 70:14.00, 70:15.00, 70:16.00, 70:17.00, 70:17.85, 70:18.00, 70:18.50, 70:19.00 69:0.75, 69:0.85, 69:4.50, 69:6.50, 69:8.00, 69:8.50, 69:9.00, 69:10.25, 69:10.50, 69:12.00, 69:18.00, 69:19.00, 69:20.00, 69:23.00, 69:29.00, 69:31.00, 69:33.00, 69:35.00 68:0.50, 68:4.00, 68:4.50, 68:5.00, 68:9.00, 68:13.00, 68:14.00, 68:15.00, 68:17.00, 68:18.00, 68:19.00 67:1.00, 67:2.50, 67:3.00, 67:4.00, 67:5.00, 67:6.00, 67:7.00, 67:8.00, 67:9.00, 67:10.00, 67:11.00, 67:12.00, 67:12.75, 67:13.00, 67:16.00, 67:18.00, 67:19.00, 67:22.00, 67:22.25, 67:23.00, 67:24.00, 67:25.00 66:3.00, 66:4.00, 66:5.00, 66:6.00, 66:7.00, 66:10.00, 66:11.00, 66:12.00, 66:14.00, 66:15.00, 66:20.00, 66:21.00, 66:23.00, 66:24.00, 66:24.50, 66:25.00, 66:26.00, 66:29.00, 66:35.00, 66:36.00, 66:38.00, 66:40.00, 66:41.00, 66:42.00, 66:45.00, 66:47.00, 66:48.00, 66:51.00, 66:54.00, 66:55.00, 66:56.00, 66:60.00, 66:61.00, 66:64.00 65:0.50, 65:0.55, 65:1.00, 65:2.00, 65:3.00, 65:4.00, 65:5.00, 65:5.50, 65:5.70, 65:6.30, 65:6.50, 65:6.60, 65:7.00, 65:8.50, 65:9.30, 65:9.40, 65:9.60, 65:9.70, 65:11.00, 65:11.50, 65:13.00, 65:14.00, 65:16.00, 65:17.00, 65:18.00, 65:19.50, 65:19.75, 65:20.00, 65:20.50, 65:21.00, 65:22.00, 65:23.00 64:1.00, 64:2.00, 64:3.00, 64:6.00, 64:8.00, 64:11.00, 64:12.50, 64:13.00, 64:14.00, 64:16.00, 64:17.00, 64:19.00, 64:19.50, 64:21.00, 64:23.00, 64:24.00, 64:25.00, 64:26.00, 64:26.50, 64:27.00, 64:28.00, 64:30.00, 64:32.50, 64:33.00, 64:34.25 63:1.00, 63:3.00, 63:4.00, 63:6.50, 63:8.00, 63:11.00, 63:12.00, 63:14.00, 63:16.00, 63:17.00, 63:18.00, 63:18.50 62:1.00, 62:2.00 61:1.00

employment sharing
see WORK SHARING

ENGINEERS
71:2.00 68:19.50 66:62.00

England
see GREAT BRITAIN

EUROPE
  71:3.25   69:4.00   66:45.00
  see also EASTERN EUROPE
            WESTERN EUROPE

extended vacations
  see VACATIONS

fabric industry
  see TEXTILE INDUSTRY

factory workers
  see BLUE COLLAR WORKERS

family effects
  see SOCIOLOGICAL AND PSYCHOLOGICAL EFFECTS

family farm
  see FARM WORKERS

FARM WORKERS (includes self-employed farmers)
  70:3.65   69:2.50, 69:8.00, 69:23.50   67:22.00   65:4.00, 65:13.00

farming
  see AGRICULTURE

featherbedding
  see WORK RULES

Federal Republic of Germany
  see WEST GERMANY

females
  see WOMEN

first job seekers
  see NEW LABOR FORCE ENTRANTS

FISCAL POLICY
  72:5.75, 72:10.00   71:1.00, 71:7.00   70:8.00, 70:10.00, 70:13.40,
  70:14.00, 70:17.00, 70:17.50, 70:18.50, 70:19.00   69:9.00   68:6.00,
  68:14.00, 68:15.00   67:1.00, 67:10.00, 67:12.00   66:6.00, 66:7.00,
  66:16.00, 66:33.00, 66:36.00, 66:40.00, 66:41.00, 66:42.00, 66:44.00,
  66:55.00, 66:58.00, 66:61.00, 66:64.00   65:4.00, 65:6.50, 65:6.60,
  65:11.00, 65:20.50   64:1.00, 64:6.00, 64:10.00, 64:11.00, 64:15.00,
  64:17.00, 64:19.00, 64:21.00, 64:25.00, 64:27.00, 64:31.00, 64:33.00
  63:2.00, 63:12.00, 63:17.00   62:2.00
  see also ECONOMIC GROWTH
            FULL EMPLOYMENT

FLEXIBLE WORK SCHEDULING
73:0.50 72:3.00, 72:5.00, 72:18.00

forced retirement
see EARLY RETIREMENT

FOREIGN TRADE POLICY
71:4.90, 71:8.00 70:18.50 66:40.00

foremen
see LABOR-MANAGEMENT
WHITE COLLAR WORKERS

FRANCE
72:6.25, 71:3.00 67:2.50 67:22.25 66:25.00, 66:37.00

FRICTIONAL UNEMPLOYMENT
64:15.00 63:6.00

FRINGE BENEFITS
72:1.60, 72:12.00, 72:22.00 71:6.25 70:8.00, 70:15.00, 70:17.00,
70:19.00 69:14.00, 69:23.00, 68:17.00, 68:18.00, 68:19.00
67:6.00, 67:7.00, 67:9.00 66:12.00, 66:29.00 65:5.70 64:3.00,
64:10.00, 64:30.00, 64:35.00 63:17.00, 63:18.00 62:2.00
61:1.00

FULL EMPLOYMENT
72:5.75, 72:8.00, 72:10.00, 72:11.50 71:4.90 70:8.00, 70:10.00,
70:11.70, 70:13.90, 70:14.00, 70:17.00, 70:18.50, 70:19.00,
68:1.00, 68:4.50, 68:14.00, 68:15.00 67:1.00, 67:4.00, 67:6.00,
67:7.00, 67:10.00, 67:14.00 66:7.00, 66:11.00, 66:13.00, 66:16.00,
66:18.00, 66:19.00, 66:21.00, 66:23.00, 66:24.00, 66:25.00, 66:33.00,
66:35.00, 66:36.00, 66:40.00, 66:41.00, 66:42.00, 66:44.00, 66:55.00,
66:56.00, 66:58.00, 66:61.00 65:0.50, 65:3.00, 65:4.00, 65:6.50,
65:15.00, 65:18.00, 65:20.50 64:1.00, 64:6.00, 64:8.00, 64:12.00,
64:19.00, 64:21.00, 64:23.00, 64:27.00, 64:31.00, 64:33.00, 64:35.00
63:2.00, 63:9.00, 63:10.00, 63:14.00, 63:17.00 62:2.00
see also ECONOMIC GROWTH
specific policy, e.g. FISCAL, MONETARY

FUTURE TRENDS
72:13.00, 72:21.00 71:3.10, 71:3.50, 71:4.25, 71:4.70, 71:4.75,
71:6.25, 71:6.50, 71:7.50, 71:8.00, 71:8.50 70:3.00, 70:3.65, 70:3.75,
70:6.00, 70:8.00, 70:9.00, 70:12.00, 70:13.20, 70:14.00, 70:15.00,
70:17.85, 70:18.00, 70:19.00, 70:20.00 69:2.50, 69:6.00, 69:8.00,
69:9.00, 69:10.00, 69:19.00, 69:29.00, 69:35.00 68:5.00, 68:18.00,
68:19.25, 68:19.50 67:2.00, 67:11.00, 67:12.50, 67:12.75, 67:22.00,
67:23.00 66:2.00, 66:4.00, 66:5.00, 66:8.00, 66:10.00, 66:15.00,
66:19.00, 66:24.50, 66:26.00, 66:29.00, 66:31.00, 66:39.00, 66:40.00,
66:41.00, 66:42.00, 66:44.00, 66:45.00, 66:47.00, 66:48.00, 66:51.00,
66:53.00, 66:55.00 65:0.55, 65:4.00, 65:6.60, 65:9.60, 65:10.40,
65:14.00, 65:18.50, 65:21.00 64:10.00, 64:14.00, 64:19.00, 64:26.00,
64:27.00 63:10.00, 63:14.00, 63:15.00, 63:15.50

FUTURIST VIEWS
72:10.00   71:1.00, 71:6.00   70:17.20   69:6.50   68:15.00,
68:17.00   67:10.00, 67:25.00   66:33.00, 66:34.00, 66:59.00
62:1.00, 62:2.00

G.A.W. (GUARANTEED ANNUAL WAGE)
72:1.60, 72:2.00   71:3.00, 71:3.50, 71:4.00, 71:6.50, 71:9.00
70:3.00, 70:8.00   69:10.50, 69:14.00, 69:25.00   68:5.00, 68:15.90,
68:16.00   67:2.50, 67:12.50, 67:19.00   66:0.50, 66:6.00, 66:7.00,
66:8.00, 66:12.00, 66:29.00, 66:41.00   65:4.00, 65:14.00, 65:19.50
64:6.00, 64:8.50, 64:10.00, 64:13.00, 64:19.00, 64:23.00   63:9.00,
63:17.00   62:2.00   61:1.00

GENERAL EQUILIBRIUM
72:11.00   71:4.50, 71:8.00   70:3.50, 70:8.00, 70:9.30, 70:17.85,
70:19.00   69:18.00,   68:6.00, 68:13.00, 68:15.00, 68:19.00
67:14.00, 67:25.00   66:4.00, 66:17.00, 66:18.00, 66:25.00, 66:33.00,
66:41.00, 66:44.00, 66:52.00, 66:56.00, 66:57.00, 66:58.00, 66:59.00,
66:61.00   65:0.50, 65:2.00, 65:6.30   64:8.00, 64:11.00, 64:12.00,
64:15.00, 64:25.00, 64:33.00   63:3.00, 63:6.00, 63:15.00, 63:17.00

general manufacturing
see MANUFACTURING

general merchandise stores
see RETAIL TRADE INDUSTRY

GEORGIA, ATLANTA
69:29.00   63:4.00

Germany
see WEST GERMANY

GLASS INDUSTRY
61:1.00

GOVERNMENT
72:7.00, 72:19.00   71:1.00, 71:3.00, 71:3.50, 71:4.00, 71:4.25,
71:4.70, 71:4.75, 71:6.50   70:3.75, 70:6.50, 70:13.90, 70:17.00,
70:17.55   69:8.50, 69:22.00   68:1.00   67:2.25   66:3.00, 66:13.00,
66:36.00, 66:41.00, 66:42.00, 66:45.00, 66:61.00, 66:64.00   65:4.00,
65:6.60, 65:9.60, 65:18.00   64:1.00, 64:6.00, 64:11.00, 64:14.00,
64:19.00, 64:19.50, 64:21.00, 64:27.00, 64:28.00   63:8.00, 63:12.00

GREAT BRITAIN
72:6.25, 72:16.00   71:2.40, 71:3.00, 71:4.00, 71:4.90   70:0.50,
70:3.50, 70:3.55, 70:3.75   69:4.50, 69:10.25   68:7.00, 68:19.50
67:2.00, 67:2.50, 67:25.00   66:22.00, 66:25.00   65:5.30   64:28.00

guaranteed annual income
see INCOME MAINTENANCE
INCOME REDISTRIBUTION

guaranteed annual wage
see G.A.W.

guaranteed employment
see G.A.W.

HANDICAPPED WORKERS
66:24.50, 66:51.00
see also DISADVANTAGED WORKERS

HEALTH SERVICES
67:12.75 66:28.00

HIGH EDUCATED (WORKERS)
67:10.00

HIGH SKILLED (WORKERS)
70:0.75 68:14.00, 68:18.00 63:7.00

HISTORICAL
73:3.00 72:9.00, 72:10.00, 72:12.00, 72:19.00 71:2.50, 71:3.50, 71:4.25, 71:4.70, 71:4.75, 71:6.00, 71:6.50, 71:7.00, 71:9.00 70:0.50, 70:1.00, 70:3.00, 70:8.00, 70:9.00, 70:10.00, 70:12.00, 70:14.00, 70:15.00, 70:17.85, 70:19.00 69:4.00, 69:6.50, 69:8.50, 69:10.00, 69:10.40, 69:29.00, 69:30.00, 69:31.00, 69:35.00 68:15.00, 68:16.00, 68:17.00, 68:18.00, 68:19.00 67:1.00, 67:4.00, 67:9.00, 67:10.00, 67:11.00, 67:12.50, 67:22.00, 67:22.25 66:2.00, 66:5.00, 66:6.00, 66:10.00, 66:15.00, 66:19.00, 66:25.00, 66:39.00, 66:47.00, 66:53.00, 66:54.00, 66:56.00 65:0.20, 65:0.55, 65:0.75, 65:5.20, 65:9.30, 65:9.40, 65:10.40, 65:10.50, 65:20.00, 65:20.25, 65:21.30 64:2.00, 64:8.50, 64:12.00, 64:31.00, 64:35.00, 64:36.00 63:6.50, 63:15.00, 63:15.50, 63:16.00 62:0.50, 62:2.00 61:1.00

Holland
see NETHERLANDS

home construction industry
see CONSTRUCTION INDUSTRY

HOURS OF WORK
73:3.00 72:10.00, 72:22.00 70:2.00, 70:8.00, 70:9.00, 70:9.50, 70:11.00, 70:17.00, 70:19.00 69:18.00 68:17.00, 68:19.00 67:8.00, 67:9.00, 67:10.00, 67:24.00 66:2.00, 66:18.00, 66:19.00, 66:22.00, 66:33.00, 66:55.00 65:0.50, 65:21.60 64:2.00, 64:16.00 63:11.00 62:1.00, 62:2.00 61:1.00

housing
  see CONSTRUCTION INDUSTRY

ILLINOIS, PEORIA
  69:33.00

IMMIGRATION POLICY
  67:1.00

import controls
  see FOREIGN TRADE POLICY

incentive schemes
  see AUTOMATION FUND
      PAY INCENTIVES

INCOME MAINTENANCE
  72:8.00   70:17.00, 70:20.00   68:6.00, 68:18.00   67:1.30, 67:9.00, 67:13.00   66:7.00, 66:15.00, 66:33.00, 66:38.00, 66:41.00, 66:42.00, 66:52.00   65:4.00, 65:11.50, 65:18.00   64:1.00, 64:11.00   63:17.00   62:2.00
  see also INCOME REDISTRIBUTION
            UNEMPLOYMENT COMPENSATION

INCOME POLICY
  72:10.00   71:3.00   70:10.00, 70:17.00   68:15.00   67:10.00

INCOME REDISTRIBUTION
  72:11.50   71:8.25   67:1.30   66:40.00   64:1.00, 64:15.00
  see also DISTRIBUTION OF INCOME
            INCOME MAINTENANCE

INDIA
  72:6.00

INDIANA, SOUTH BEND
  66:46.00   64:34.50

INDIANS (NATIVE AMERICANS)
  65:13.00

industrial chemical industry
  see CHEMICAL INDUSTRY

industrial relations
  see LABOR-MANAGEMENT

INDUSTRIAL STRUCTURE
  72:8.00

INFLATION
68:10.00

INFORMATION
70:9.30, 70:14.00, 70:17.90, 70:19.00   69:2.50, 69:8.50, 69:23.50,
69:31.00   67:1.00, 67:2.00, 67:4.00, 67:6.00, 67:10.00, 67:12.75,
67:14.00, 67:23.00, 67:25.00   66:4.00, 66:6.00, 66:7.00, 66:30.00,
66:33.00, 66:41.00, 66:42.00, 66:47.00, 66:48.00, 66:61.00   65:0.50,
65:3.00, 65:4.00, 65:6.50, 65:6.60, 65:10.00, 65:17.00, 65:23.00
64:6.00, 64:12.00, 64:12.50, 64:19.00, 64:25.00, 64:26.50, 64:27.50
63:14.00, 63:19.00

INFORMATION FLOWS
68:10.00

INNOVATION TIMING
70:3.00, 70:6.00, 70:11.00, 70:19.50   69:23.00, 69:26.00, 69:27.00
68:1.00, 68:14.00   67:11.00, 67:13.75, 67:25.00   66:12.00, 66:26.00,
66:41.00, 66:56.00, 66:58.00, 66:62.00   65:10.25, 65:10.75, 65:21.00,
65:22.00   64:14.00, 64:15.00, 64:20.00, 64:31.00   61:1.00

INNOVATION TYPE
70:13.40   69:10.00   68:1.00   67:2.50, 67:5.00, 67:23.00
66:42.00, 66:44.00, 66:58.00   65:21.60   64:12.50, 64:15.00, 64:20.00,
64:25.00, 64:33.00   63:18.50

INPUT-OUTPUT
66:14.00, 66:58.00   64:12.00

instructors
see EDUCATORS

INSURANCE INDUSTRY
70:18.00   68:17.00   67:22.50   66:37.00   62:1.00

INTERNAL LABOR MARKET
73:2.00

INTERNAL REVENUE SERVICE
69:29.00   63:4.00

interplant transfer
see TRANSFER OPTIONS

INTERSTATE COMMERCE COMMISSION
69:7.00

intraplant transfer
see TRANSFER OPTIONS

investment pay schemes
see PAY INCENTIVES

investment tax credit
see CAPITAL TAXATION

IOWA, SIOUX CITY
66:46.00

iron and steel industry
see STEEL INDUSTRY

ISRAEL
70:11.40 68:19.25

ITALY
72:6.00 70:3.50 66:25.00

JAPAN
72:6.25 71:6.30 70:7.25 68:19.00 67:22.50 66:23.50,
66:27.50 65:19.00, 65:20.00

JOB ASSIGNMENTS
71:2.00

JOB CONTENT
73:0.25, 73:3.00 72:1.50, 72:3.00, 72:5.00, 72:13.00, 72:15.00,
72:18.00, 72:22.00 71:0.50, 71:2.40, 71:3.00, 71:4.25, 71:6.25, 71:7.00,
71:8.50 70:1.50, 70:3.55, 70:6.00, 70:11.70, 70:18.00 69:5.50,
69:16.00, 69:23.00, 69:25.00, 69:26.00, 69:27.00, 69:28.00, 69:30.00
68:0.50, 68:2.00, 68:7.00, 68:8.00, 68:9.00, 68:14.00 67:1.30, 67:1.60,
67:6.00, 67:8.00, 67:22.00, 67:22.50, 67:23.00 66:1.00, 66:8.00,
66:9.00, 66:12.00, 66:13.00, 66:20.00, 66:22.00, 66:24.00, 66:28.00, 66:45.00,
66:50.00, 66:56.00, 66:58.00, 66:62.00 65:0.50, 65:1.00, 65:5.10, 65:5.50,
65:10.00, 65:10.40, 65:10.75, 65:11.00, 65:13.00, 65:18.00 64:11.00,
64:12.00, 64:12.50, 64:15.00, 64:18.00, 64:19.00, 64:25.00, 64:26.00,
64:27.50, 64:31.00 63:7.00, 63:9.00 62:0.50, 62:1.00 61:1.00
see also WORK RULES

job enlargement
see JOB CONTENT

job enrichment
see JOB CONTENT

job flexibility
see FLEXIBLE WORK SCHEDULING
JOB CONTENT
SKILL REQUIREMENTS

job freezes
see WORK RULES

JOB SATISFACTION
72:3.00, 72:5.00, 72:6.00, 72:7.00, 72:10.00, 72:13.00, 72:18.00, 72:22.00 71:2.40, 71:2.50, 71:7.00, 71:8.50 70:1.00, 70:8.00, 70:11.00, 70:12.00, 70:13.00, 70:16.00, 70:18.00 69:16.00, 69:20.00, 69:21.00, 69:23.00, 69:26.00, 69:27.00, 69:30.00 68:8.00, 68:15.00, 68:17.00, 68:19.00 67:1.30, 67:2.50, 67:7.00, 67:8.00, 67:13.00 66:37.00, 66:49.00, 66:51.00, 66:55.00 65:0.55, 65:6.00, 65:9.60, 65:10.75, 65:20.25 64:9.00, 64:11.00, 64:26.00 63:15.50 62:1.00, 62:2.00

JOB SECURITY
72:1.00, 72:1.50, 72:2.00, 72:4.00, 72:6.25, 72:6.50, 72:12.00 71:3.50, 71:4.00, 71:6.50 70:3.00, 70:3.55, 70:8.00, 70:9.00, 70:12.00, 70:15.00, 70:16.00, 70:17.85 69:14.00, 69:23.00, 69:30.00, 69:35.00 68:8.00, 68:14.00, 68:15.00, 68:19.00 67:2.50, 67:5.00, 67:7.00, 67:8.00, 67:9.00, 67:10.00, 67:11.00, 67:13.75, 67:25.00 66:6.00, 66:7.00, 66:8.00, 66:12.00, 66:23.00, 66:26.00, 66:29.00, 66:33.00, 66:35.00, 66:40.00, 66:41.00, 66:54.00 65:0.50, 65:4.00, 65:11.00, 65:14.00, 65:20.60, 65:21.30 64:6.00, 64:8.00, 64:8.50, 64:19.50, 64:20.00, 64:27.00, 64:27.50, 64:31.00, 64:32.50 63:1.00, 63:4.00, 63:7.00, 63:9.00, 63:15.00, 63:15.50, 63:16.00, 63:18.00, 63:18.50 62:1.00, 62:2.00 61:1.00

job upgrading
see JOB CONTENT

joint consultation
see LABOR-MANAGEMENT COOPERATION

KNOWLEDGE WORKERS
73:0.75

labor-capital ratio
see CAPITAL-LABOR RATIO

LABOR DEMAND
71:6.25 69:0.85

LABOR FORCE PARTICIPATION RATE
66:24.00

LABOR-MANAGEMENT
72:1.00, 72:3.00, 72:4.00, 72:6.25, 72:11.50, 72:12.00 71:4.00, 71:4.75, 71:6.50 70:2.00, 70:3.00, 70:3.75, 70:6.50, 70:7.50, 70:9.50, 70:11.40, 70:13.90 69:27.00 68:0.50, 68:0.75, 68:1.00, 68:8.00, 68:9.00, 68:20.00 67:2.25, 67:5.00, 67:11.00 66:45.00, 66:63.00 65:13.00 64:27.50, 64:30.00 61:1.00

LABOR-MANAGEMENT COOPERATION
72:3.00, 72:13.00 71:3.50, 71:4.70, 71:6.30 70:0.50, 70:1.00, 70:2.00,
70:3.00, 70:3.55, 70:6.00, 70:8.00, 70:9.00, 70:11.40, 70:12.00, 70:15.00,
70:16.00 69:0.75, 69:26.00, 69:31.00 68:1.00, 68:4.50, 68:7.00,
68:14.00, 68:15.00, 68:15.90, 68:19.00, 68:20.00 67:2.50, 67:6.00,
67:7.00, 67:7.50, 67:9.00, 67:12.75, 67:19.00, 67:25.00 66:63.00
65:4.00, 65:20.60, 65:22.00 64:7.00, 64:12.50, 64:16.00, 64:19.00
63:7.00, 63:15.00, 63:16.00, 63:19.00 62:1.00, 62:2.00 61:1.00

LABOR MARKET
63:6.00

labor market, internal
see INTERNAL LABOR MARKET

LABOR MOBILITY
73:0.75, 73:2.00 71:3.00, 71:4.00 70:6.00, 70:8.00, 70:9.00, 70:10.00,
70:14.00, 70:16.00, 70:19.00 69:4.00, 69:8.00, 69:8.50, 69:10.50, 69:14.00,
69:23.00, 69:33.00 68:17.00, 68:18.00, 68:19.00 67:4.00, 67:5.00,
67:6.00, 67:9.00, 67:10.00, 67:12.75, 67:16.00, 67:20.00, 67:22.00, 67:22.25,
67:23.00, 67:25.00 66:0.50, 66:19.00, 66:20.00, 66:24.00, 66:33.00,
66:45.00, 66:46.00, 66:54.00, 66:56.00, 66:57.00 65:3.00, 65:6.50,
65:11.00, 65:13.00, 65:20.00 64:3.00, 64:12.00, 64:12.50, 64:14.00,
64:15.00, 64:25.00, 64:26.50, 64:27.00, 64:27.50, 64:31.00, 64:32.50,
64:33.00 63:6.00, 63:7.00, 63:13.00, 63:16.00

LATIN AMERICA
69:9.00

LAUNDRY INDUSTRY
72:21.00

LAYOFF NOTIFICATION
72:1.60, 72:2.00, 72:15.00 71:4.25, 71:4.75, 71:6.50 70:0.50, 70:6.00,
70:6.50, 70:9.40, 70:15.00, 70:16.00 69:2.00, 69:8.50, 69:14.00, 69:31.00,
69:33.00 68:4.50, 68:14.00, 68:15.90, 68:19.00, 68:21.00 67:2.00,
67:2.50, 67:6.00, 67:7.00, 67:7.50, 67:9.00, 67:14.00, 67:16.00, 67:17.00,
67:19.00 66:0.50, 66:3.00, 66:6.00, 66:7.00, 66:12.00, 66:17.00, 66:32.00,
66:41.00 65:0.50, 65:4.00, 65:5.50, 65:6.50, 65:20.50 64:3.00, 64:6.00,
64:8.00, 64:8.50, 64:13.00, 64:27.00, 64:29.00 63:9.00, 63:15.00
62:2.00 61:1.00

layoffs
see UNEMPLOYMENT

LEGISLATION
72:1.50, 72:7.00, 72:19.00 71:1.00, 71:4.70 70:10.00 69:19.00,
69:35.00 68:2.00 67:1.00, 67:22.00 66:16.00, 66:29.00, 66:41.00,
66:42.00, 66:47.00, 66:61.00 65:0.20, 65:0.50, 65:4.00, 65:6.50, 65:9.60,
65:13.00 64:1.00, 64:2.00, 64:6.00, 64:11.00, 64:31.00, 64:33.00
63:1.00

LEISURE
73:0.50 71:7.00 70:13.20, 70:17.00 69:6.50 68:4.00 67:13.00, 67:24.00, 67:25.00 66:2.00, 66:55.00, 66:63.00 65:9.70 64:11.00 63:11.00, 63:17.00

LESS DEVELOPED COUNTRIES
70:17.55 69:24.00

LETTUCE INDUSTRY
65:13.00

LIBRARIANSHIP
70:13.00

life insurance industry
see INSURANCE INDUSTRY

literature review
see REVIEW OF THE LITERATURE

longshore industry
see SHIPPING INDUSTRY

LONGSHOREMEN
72:1.00, 72:14.00 71:4.00 70:8.00 69:8.50, 69:10.00 68:5.00, 68:16.00 64:8.50 63:9.00

LOW EDUCATED (WORKERS)
68:6.00 67:10.00

LOW SKILLED (WORKERS)
72:1.75 70:0.50 69:2.50, 69:8.00 68:14.00 66:32.00 65:0.50 63:7.00

LUXEMBOURG
69:10.25

MACHINE OPERATORS
72:14.00

MACHINE SHOP
66:28.00

MACHINE TOOL INDUSTRY
68:19.50

MACRO
73:2.00 72:1.50, 72:1.60, 72:1.75, 72:5.00, 72:5.75, 72:7.00, 72:10.00, 72:11.00, 72:11.50, 72:13.00 71:1.00, 71:1.50, 71:2.00, 71:3.00, 71:4.50, 71:4.90, 71:5.00, 71:7.50 70:0.10, 70:0.25, 70:1.00, 70:1.50, 70:2.00, 70:3.55, 70:7.25, 70:7.50, 70:8.00, 70:9.00, 70:9.30, 70:10.00, 70:11.70, 70:13.20, 70:13.40, 70:13.90, 70:14.00, 70:16.00, 70:17.00, 70:17.20, 70:17.50, 70:17.55, 70:17.60, 70:18.50, 70:19.00, 70:20.00 69:5.00, 69:5.50, 69:6.00, 69:9.00, 69:10.25, 69:12.00, 69:13.00, 69:19.00, 69:22.00, 69:23.00,

MACRO (cont.)
69:28.00, 69:30.50, 69:34.00 68:0.50, 68:0.75, 68:1.00, 68:4.00, 68:10.00,
68:14.00, 68:15.00, 68:15.90, 68:17.00, 68:18.00, 68:19.00, 68:19.25,
68:19.50 67:1.00, 67:1.30, 67:1.60, 67:2.00, 67:2.25, 67:3.00, 67:4.00,
67:5.00, 67:10.00, 67:12.00, 67:12.75, 67:13.00, 67:14.00, 67:21.00,
67:22.00, 67:23.00, 67:24.00, 67:25.00 66:0.50, 66:6.00, 66:7.00, 66:9.00,
66:11.00, 66:13.00, 66:16.00, 66:17.00, 66:18.00, 66:19.00, 66:20.00,
66:21.00, 66:23.00, 66:24.00, 66:27.50, 66:29.00, 66:30.00, 66:31.00,
66:32.00, 66:33.00, 66:34.00, 66:35.00, 66:36.00, 66:38.00, 66:40.00,
66:41.00, 66:42.00, 66:44.00, 66:45.00, 66:48.00, 66:49.00, 66:50.00,
66:51.00, 66:54.00, 66:55.00, 66:56.00, 66:58.00, 66:59.00, 66:61.00,
66:64.00 65:0.20, 65:2.00, 65:4.00, 65:5.00, 65:6.50, 65:6.60, 65:7.00,
65:8.50, 65:9.30, 65:9.60, 65:9.70, 65:10.00, 65:11.00, 65:11.50, 65:14.00,
65:17.00, 65:18.00, 65:18.50, 65:20.50, 65:23.00 64:1.00, 64:6.00,
64:9.00, 64:10.00, 64:11.00, 64:12.00, 64:13.00, 64:14.00, 64:15.00,
64:17.00, 64:18.00, 64:19.00, 64:19.50, 64:21.00, 64:23.00, 64:24.00,
64:25.00, 64:26.00, 64:26.50, 64:28.00, 64:31.00, 64:32.50, 64:33.00
63:2.00, 63:8.00, 63:10.00, 63:11.00, 63:12.00, 63:14.00, 63:15.00
62:0.50

MAINTENANCE WORKERS
71:4.60

management
see LABOR-MANAGEMENT
WHITE COLLAR WORKERS

MANAGEMENT PRACTICES
72:16.00, 72:18.00, 72:22.00 71:0.50, 71:2.40, 71:2.50, 71:3.00, 71:3.50,
71:4.25, 71:4.70, 71:6.25 70:1.50, 70:18.00, 70:18.50 69:0.75,
69:6.00, 69:26.00 67:12.50, 67:13.75 66:3.00, 66:6.00, 66:29.00,
66:42.00, 66:62.00, 66:64.00 65:0.50, 65:0.55, 65:4.00, 65:9.60, 65:10.40,
65:10.75, 65:11.00, 65:18.00, 65:20.60, 65:21.30, 65:22.00 64:6.00,
64:7.00, 64:8.50, 64:10.00, 64:13.00, 64:16.00, 64:19.00, 64:19.50, 64:25.00,
64:27.00, 64:27.50, 64:28.00, 64:34.00 63:1.00, 63:5.50

Manpower Development and Training Act
see MANPOWER PROGRAMS

MANPOWER FORECASTING
70:2.00 66:58.00 63:15.00

manpower problems
see LABOR-MANAGEMENT

MANPOWER PROGRAMS
73:1.00 72:5.75, 72:10.00, 72:14.00 71:1.00, 71:3.25, 71:4.90,
71:5.00, 71:7.50 70:0.10, 70:0.25, 70:0.50, 70:3.55, 70:3.65, 70:7.25,
70:7.50, 70:8.00, 70:9.30, 70:10.00, 70:13.40, 70:13.90, 70:14.00, 70:17.00,
70:17.50, 70:17.85, 70:19.00, 70:20.00 69:2.50, 69:5.00, 69:5.50,
69:8.00, 69:8.50, 69:18.00, 69:19.00, 69:30.50, 60:31.00 68:0.50,
68:0.75, 68:1.00, 68:2.00, 68:6.00, 68:9.00, 68:10.00, 68:15.00, 68:18.00,
68:19.50, 68:21.00 67:1.00, 67:1.30, 67:2.00, 67:2.25, 67:3.00, 67:4.00

MANPOWER PROGRAMS (cont.)
67:6.00, 67:7.00, 67:9.00, 67:10.00, 67:12.75, 67:13.00, 67:14.00, 67:21.00, 67:22.00, 67:23.00, 67:24.00 66:0.50, 66:3.00, 66:7.00, 66:9.00, 66:11.00, 66:12.00, 66:13.00, 66:16.00, 66:17.00, 66:19.00, 66:20.00, 66:21.00, 66:24.00, 66:25.00, 66:27.50, 66:29.00, 66:31.00, 66:33.00, 66:35.00, 66:41.00, 66:42.00, 66:45.00, 66:48.00, 66:51.00, 66:54.00, 66:56.00, 66:59.00, 66:61.00 65:0.50, 65:5.00, 65:5.00, 65:6.50, 65:6.60, 65:8.50, 65:9.30, 65:9.60, 65:10.00, 65:10.25, 65:10.40, 65:11.00, 65:17.00, 65:18.00, 65:20.50, 65:23.00 64:6.00, 64:8.00, 64:10.00, 64:12.00, 64:12.50, 64:14.00, 64:15.00, 64:17.00, 64:18.00, 64:19.00, 64:21.00, 64:23.00, 64:26.00, 64:26.50, 64:27.00, 64:31.00, 64:32.50, 64:33.00, 64:36.00 63:2.00, 63:6.50, 6 :10.00, 63:11.00, 63:13.00, 63:14.00, 63:15.00, 63:19.00 62:2.00

MANUFACTURING
70:6.00, 70:17.60 68:10.00, 68:18.00 66:25.00 65:10.50 61:1.00

MARITIME INDUSTRY
71:3.50 65:16.00, 65:21.00
see also SHIPPING INDUSTRY

MEATPACKING INDUSTRY
70:8.00, 70:9.00 68:17.00 66:28.00 64:8.50, 64:29.00 63:19.00 61:1.00

mediation
see PUBLIC REPRESENTATION IN BARGAINING

MEDIATOR
70:6.00, 70:8.00, 70:9.00, 70:15.00 65:0.50 63:9.00 62:2.00 61:1.00

medical services
see HEALTH SERVICES

mentally retarded workers
see HANDICAPPED WORKERS

METAL PRODUCTS
72:5.50

MEXICAN-AMERICANS
65:13.00

MICRO
73:0.25, 73:0.50, 73:1.00, 73:2.00 72:1.00, 72:2.00, 72:3.00, 72:4.00, 72:5.00, 72:5.50, 72:6.00, 72:6.25, 72:6.50, 72:8.00, 72:9.00, 72:12.00, 72:14.00, 72:15.00, 72:16.00, 72:17.00, 72:18.00, 72:20.00, 72:21.00, 72:22.00 71:0.50, 71:2.40, 71:2.50, 71:3.00, 71:3.25, 71:4.00, 71:4.60, 71:6.25, 71:6.30, 71:7.25, 71:8.50, 71:9.00 70:0.75, 70:1.00, 70:3.60, 70:3.65, 70:3.75, 70:6.00, 70:6.50, 70:7.50, 70:8.00, 70:9.00, 70:9.25, 70:9.40, 70:9.50, 70:11.00, 70:11.40, 70:13.00, 70:13.40, 70:14.00, 70:15.00, 70:17.20, 70:17.50, 70:17.90, 70:18.00, 70:19.00, 70:19.50 69:0.75, 69:0.85, 69:2.50, 69:4.50, 69:7.00, 69:8.00, 69:9.50, 69:10.00, 69:10.50,

MICRO (cont.)
69:14.00, 69:16.00, 69:17.00, 69:20.00, 69:21.00, 69:23.50, 69:24.00, 69:25.00, 69:26.00, 69:27.00, 69:29.00, 69:31.00, 69:33.00   68:1.00, 68:4.50, 68:5.00, 68:7.00, 68:8.00, 68:9.00, 68:14.00, 68:15.00, 68:16.00, 68:17.00, 68:19.00, 68:20.00, 68:21.00   67:1.00, 67:2.50, 67:4.00, 67:5.00, 67:7.00, 67:7.50, 67:8.00, 67:8.25, 67:9.00, 67:13.75, 67:16.00, 67:17.00, 67:18.00, 67:19.00, 67:20.00, 67:22.25, 67:22.50   66:0.50, 66:1.00, 66:3.00, 66:6.00, 66:7.00, 66:8.00, 66:9.00, 66:12.00, 66:13.00, 66:14.00, 66:22.00, 66:23.00, 66:23.50, 66:24.50, 66:26.00, 66:27.00, 66:28.00, 66:29.00, 66:31.00, 66:35.00, 66:37.00, 66:41.00, 66:42.00, 66:45.00, 66:46.00, 66:50.00, 66:51.00, 66:60.00, 66:61.00, 66:62.00, 66:63.00, 66:64.00   65:0.50, 65:0.75, 65:1.00, 65:3.00, 65:4.00, 65:5.10, 65:5.20, 65:5.30, 65:5.50, 65:5.70, 65:6.00, 65:6.50, 65:9.60, 65:10.25, 65:10.50, 65:10.75, 65:11.00, 65:11.50, 65:13.00, 65:14.00, 65:16.00, 65:18.00, 65:19.00, 65:19.50, 65:19.75, 65:20.00, 65:20.60, 65:21.00, 65:21.60, 65:22.00   64:3.00, 64:6.00, 64:7.00, 64:9.00, 64:10.00, 64:11.00, 64:12.50, 64:13.00, 64:14.00, 64:16.00, 64:18.00, 64:19.00, 64:19.50, 64:20.00, 64:23.00, 64:26.00, 64:27.00, 64:27.50, 64:28.00, 64:29.00, 64:30.00, 64:32.50, 64:34.00, 64:34.25, 64:34.50   63:1.00, 63:3.00, 63:4.00, 63:5.00, 63:5.50, 63:6.50, 63:7.00, 63:8.00, 63:9.00, 63:16.00, 63:18.00, 63:18.50, 63:19.00   62:1.00, 62:2.00   61:1.00

middle management
see WHITE COLLAR WORKERS

MIDWEST UNITED STATES
67:8.00

MINIMUM WAGES
70:10.00   68:15.00   67:1.00, 67:12.75, 67:22.00   66:7.00, 66:18.00, 66:19.00, 66:40.00, 66:41.00, 66:42.00, 66:61.00   65:1.00, 65:4.00, 65:6.60, 65:13.00   64:2.00, 64:6.00, 64:11.00   63:12.00

MINING
68:18.00
see also specific types, e.g. COAL MINING

MINORITY GROUP WORKERS
70:3.65   69:30.50   67:20.00   66:47.00   65:4.00, 65:13.00   64:29.00
see also DISADVANTAGED WORKERS
specific minority groups, e.g. BLACKS, MEXICAN-AMERICANS

MISSISSIPPI DELTA
67:8.25

MISSOURI, ST. LOUIS
73:0.25

model
see THEORETICAL MODEL

MONETARY POLICY
72:5.75 71:1.00 70:10.00, 70:14.00, 70:17.00 67:1.00, 67:10.00, 67:12.00 66:7.00, 66:33.00, 66:36.00, 66:41.00, 66:42.00, 66:44.00, 66:55.00, 66:61.00 65:4.00, 65:6.50, 65:20.50 64:6.00, 64:15.00, 64:19.00, 64:21.00, 64:25.00, 64:27.00 63:2.00, 63:17.00

MULTICRAFT UNION
71:4.70 70:11.70 69:14.00 68:7.00 66:63.00 65:21.00, 65:21.60 64:19.00 62:2.00
see also UNION MERGERS

MULTINATIONAL FIRMS
72:1.75

MUSICIANS' UNION
65:5.20

NATIONALIZATION
72:1.75 71:4.00 69:22.00 66:40.00

NEBRASKA, OMAHA
69:31.00

negative income tax
see INCOME MAINTENANCE

Negroes
see BLACKS

NETHERLANDS
70:3.50 67:2.00 66:25.00

New Careers Program
see MANPOWER PROGRAMS

NEW LABOR FORCE ENTRANTS
66:52.00 64:12.00

NEW YORK
73:2.00 70:11.00 69:10.50 64:16.00

NEW ZEALAND
72:9.00

NEWSPAPER INDUSTRY
73:0.25

19th CENTURY
66:39.00

NON-UNION WORKERS
65:10.50

NONWHITE WORKERS
70:3.65 66:51.00 64:12.00
see also specific ethnic and minority groups

NORTH CENTRAL UNITED STATES
67:4.00 63:6.50

NORTHEASTERN UNITED STATES
67:4.00

NORWAY
71:2.40 67:2.50

NOVA SCOTIA, NORTH SYDNEY
69:8.50

O.E.C.D.
see ORGANIZATION FOR ECONOMIC COOPERATION AND DEVELOPMENT

O.J.T. (on-the-job training)
see RETRAINING, PRIVATE

OCCUPATIONAL STRUCTURE
73:2.00 70:0.50, 70:3.00, 70:6.00 69:10.00 68:18.00, 68:19.00
66:18.00, 66:45.00, 66:57.00 65:0.50, 65:10.00 63:15.50

OFFICE WORKERS
71:8.50 70:8.00 68:8.00 65:10.75, 65:19.75 63:4.00, 63:5.50

OHIO
67:9.00

OIL INDUSTRY
70:0.50, 70:0.75, 70:19.00 69:9.50 67:16.00, 67:17.00 66:22.00
64:8.50

OKLAHOMA, OKLAHOMA CITY
63:19.00

OLDER WORKERS
71:2.00 70:0.10, 70:11.70 69:7.00, 69:16.00, 69:26.00 68:6.00
67:14.00, 67:16.00, 67:22.50 66:20.00, 66:23.00, 66:25.00, 66:38.00,
66:46.00, 66:51.00, 66:55.00 65:1.00, 65:4.00, 65:6.00, 65:11.50
64:29.00 63:5.00

on-the-job training
see RETRAINING, PRIVATE

ONGOING TRENDS
73:0.25, 73:1.00, 73:3.00 72:1.00, 72:1.50, 72:1.60, 72:1.75, 72:3.00, 72:4.00, 72:5.00, 72:6.25, 72:6.50, 72:7.00, 72:8.00, 72:10.00, 72:13.00, 72:14.00, 72:19.00, 72:21.00 71:0.50, 71:1.00, 71:2.00, 71:3.10, 71:3.25, 71:3.50, 71:4.25, 71:4.60, 71:4.70, 71:4.75, 71:4.90, 71:5.00, 71:6.25, 71:6.30, 71:6.50, 71:7.00, 71:7.50, 71:8.00, 71:8.25, 71:8.50 70:0.25, 70:0.75, 70:2.00, 70:3.00, 70:3.50, 70:3.65, 70:3.75, 70:6.00, 70:7.25, 70:8.00, 70:9.00, 70:9.50, 70:10.00, 70:11.40, 70:12.00, 70:13.20, 70:13.90, 70:14.00, 70:15.00, 70:16.00, 70:17.20, 70:17.50, 70:17.85, 70:18.00, 70:18.50, 70:19.00, 70:20.00 69:2.00, 69:2.50, 69:4.50, 69:6.00, 69:6.50, 69:8.00, 69:9.00, 69:9.50, 69:10.00, 69:10.25, 69:10.40, 69:10.50, 69:12.00, 69:13.00, 69:14.00, 69:18.00, 69:19.00, 69:20.00, 69:22.00, 69:23.50, 69:24.00, 69:25.00, 69:28.00, 69:30.00, 69:30.50, 69:31.00, 69:33.00, 69:35.00 68:0.50, 68:0.75, 68:1.00, 68:4.50, 68:5.00, 68:6.00, 68:7.00, 68:10.00, 68:14.00, 68:15.00, 68:15.90, 68:16.00, 68:17.00, 68:18.00, 68:19.00, 68:19.25, 68:19.50, 68:20.00 67:1.00, 67:1.30, 67:1.60, 67:2.00, 67:2.25, 67:3.00, 67:4.00, 67:6.00, 67:7.00, 67:7.00, 67:7.50, 67:9.00, 67:10.00, 67:11.00, 67:12.50, 67:12.75, 67:13.00, 67:22.00, 67:22.25, 67:23.00, 67:24.00 66:0.50, 66:3.00, 66:4.00, 66:5.00, 66:8.00, 66:10.00, 66:11.00, 66:17.00, 66:21.00, 66:22.00, 66:24.50, 66:27.50, 66:29.00, 66:30.00, 66:31.00, 66:32.00, 66:37.00, 66:40.00, 66:41.00, 66:42.00, 66:44.00, 66:45.00, 66:48.00, 66:49.00, 66:51.00, 66:52.00, 66:53.00, 66:54.00, 66:55.00, 66:56.00, 66:57.00, 66:58.00, 66:59.00, 66:61.00, 66:62.00, 66:63.00 65:0.20, 65:0.50, 65:0.55, 65:1.00, 65:2.00, 65:4.00, 65:5.50, 65:6.30, 65:6.50, 65:9.40, 65:10.00, 65:10.40, 65:14.00, 65:16.00, 65:17.00, 65:18.00, 65:18.50, 65:20.00, 65:20.50, 65:21.00, 65:21.30 64:2.00, 64:3.00, 64:7.00, 64:8.00, 64:10.00, 64:12.50, 64:14.00, 64:18.00, 64:19.00, 64:24.00, 64:26.00, 64:27.00, 64:27.50, 64:28.00, 64:31.00, 64:32.50, 64:33.00, 64:34.25, 64:35.00, 64:36.00 63:1.00, 63:5.50, 63:6.00, 63:6.50, 63:8.00, 63:9.00, 63:10.00, 63:12.00, 63:13.00, 63:14.00, 63:15.00, 63:15.50, 63:18.50 62:0.50, 62:1.00, 62:2.00 61:1.00

OPPORTUNITY COST
63:6.00

ORGANIZATION FOR ECONOMIC COOPERATION AND DEVELOPMENT (OECD)
66:4.00

organization strategy
see MANAGEMENT PRACTICES

organizational structure
see MANAGEMENT PRACTICES

OVERTIME
71:4.90 70:11.00 67:10.00, 67:24.00 66:12.00, 66:22.00 65:0.50 64:11.00, 64:33.00 61:1.00

P.E.P.
see PUBLIC EMPLOYMENT PROGRAMS

PAST TRENDS
72:1.00, 72:1.50, 72:1.60, 72:1.75, 72:6.50, 72:8.00, 72:9.00, 72:16.00, 72:19.00 71:3.50, 71:4.25, 71:4.70, 71:4.75, 71:6.00, 71:6.50, 71:7.50, 71:8.25 70:0.25, 70:3.00, 70:3.75, 70:6.50, 70:8.00, 70:9.25, 70:10.00, 70:13.90, 70:14.00, 70:15.00, 70:19.00 69:4.00, 69:6.50, 69:10.00, 69:13.00, 69:29.00, 69:31.00 68:7.00, 68:15.00, 68:17.00, 68:18.00, 68:19.00, 68:21.00 67:4.00, 67:10.00, 67:11.00, 67:12.50, 67:17.00, 67:20.00 66:2.00, 66:5.00, 66:10.00, 66:11.00, 66:15.00, 66:19.00, 66:24.00, 66:39.00, 66:44.00, 66:46.00, 66:47.00, 66:48.00 65:0.20, 65:0.55, 65:0.75, 65:1.00, 65:5.20, 65:5.50, 65:6.30, 65:9.40, 65:10.50, 65:20.00, 65:21.30 64:2.00, 64:8.50, 64:12.50, 64:19.00, 64:28.00, 64:31.00, 64:32.50, 64:35.00 63:6.60, 63:9.00, 63:10.00, 63:15.00, 63:16.00 62:0.50, 62:2.00 61:1.00

PAY INCENTIVES
72:22.00 71:0.50, 71:3.00, 71:4.25, 71:4.75, 71:7.00 70:0.50, 70:2.00, 70:3.50, 70:3.75 69:8.00, 69:23.00, 69:25.00, 69:28.00, 69:30.00 68:0.50, 68:8.00, 68:9.00 67:22.50 66:8.00, 66:12.00, 66:22.00, 66:41.00

PAYGRADES
72:2.00, 72:3.00, 72:5.00, 72:12.00 71:6.50, 71:9.00 70:6.00, 70:8.00, 70:9.00, 70:15.00, 70:16.00 69:25.00 68:19.00 67:2.50, 67:10.00, 67:14.00 66:41.00, 66:45.00 65:5.50, 65:11.00 64:8.50, 64:10.00, 64:13.00, 64:19.00 63:9.00 62:1.00, 62:2.00

PENNSYLVANIA
72:20.00

PENSION RIGHTS
73:1.00 72:1.60, 72:2.00 71:2.00, 71:4.00 70:3.00, 70:8.00, 70:9.00, 70:9.50, 70:15.00, 70:16.00 69:10.00, 69:12.00, 69:14.00, 69:31.00 68:1.00, 68:5.00, 68:15.00 67:2.50, 67:7.00, 67:11.00, 67:19.00 66:0.50, 66:6.00, 66:7.00, 66:12.00, 66:20.00, 66:23.00, 66:32.00, 66:33.00, 66:38.00, 66:46.00, 66:61.00 65:0.50, 65:1.00, 65:3.00, 65:4.00, 65:5.70, 65:6.30, 65:9.40, 65:11.50, 65:14.00, 65:21.00 64:3.00, 64:8.00, 64:8.50, 64:19.00, 64:30.00, 64:31.00 63:18.00 62:2.00

PERSONNEL ADMINISTRATION
72:15.00

PETROCHEMICAL INDUSTRY
66:23.50

petroleum refining
see OIL INDUSTRY

PHARMACEUTICAL INDUSTRY
72:17.00

pilots
see AIRLINE PILOTS

PLACEMENT SERVICE
69:31.00 68:0.75, 68:2.00, 68:17.00, 68:18.00, 68:21.00 67:1.00, 67:14.00, 67:23.00 66:12.00, 66:33.00, 66:35.00, 66:41.00, 66:48.00 65:4.00, 65:6.50, 65:8.50, 65:20.50 64:6.00, 64:19.00 63:19.00

PLANNING, PRIVATE
72:3.00, 72:10.00, 72:15.00, 72:18.00 70:3.00, 70:3.65, 70:6.00, 70:8.00, 70:9.00, 70:11.00, 70:12.00, 70:13.00, 70:15.00, 70:16.00 69:10.25, 69:13.00, 69:23.00, 69:26.00 68:0.75, 68:4.50, 68:8.00, 68:9.00, 68:15.00, 68:19.00 67:2.50, 67:5.00, 67:6.00, 67:7.00, 67:8.00, 67:9.00, 67:10.00, 67:12.75, 67:20.00, 67:22.50, 67:25.00 66:3.00, 66:4.00, 66:6.00, 66:12.00, 66:26.00, 66:42.00, 66:54.00, 66:62.00 65:4.00, 65:6.50, 65:10.25, 65:18.00, 65:20.50, 65:20.60, 65:21.00, 65:22.00 64:10.00, 64:12.50, 64:14.00, 64:18.00, 64:19.00, 64:25.00, 64:27.50, 64:28.00, 64:31.00 63:4.00, 63:5.50, 63:7.00, 63:18.50, 63:19.00 62:1.00, 62:2.00 61:1.00

PLANNING, PUBLIC
72:5.00, 72:7.00, 72:10.00 71:1.00, 71:6.00, 71:7.00 70:0.50, 70:3.65, 70:10.00 69:6.50, 69:8.50, 69:9.00, 69:13.00, 69:18.00, 69:19.00, 69:22.00 68:0.75, 68:1.00, 68:9.00, 68:18.00 67:1.00, 67:4.00, 67:6.00 66:4.00, 66:7.00, 66:16.00, 66:31.00, 66:39.00, 66:40.00, 66:41.00, 66:42.00, 66:45.00, 66:47.00, 66:48.00, 66:53.00, 66:56.00, 66:61.00, 66:62.00 65:3.00, 65:6.50, 65:8.50, 65:9.60, 65:10.00, 65:11.00, 65:13.00, 65:17.00, 65:20.50 64:1.00, 64:6.00, 64:10.00, 64:11.00, 64:12.00, 64:13.00, 64:15.00, 64:17.00, 64:19.00, 64:21.00, 64:23.00, 64:26.50, 64:28.00, 64:32.50 63:2.00, 63:10.00, 63:11.00, 63:14.00

PLANT SHUTDOWNS
70:9.40 66:52.00

POLAND
69:10.25

POPULATION CONTROL
72:10.00

POST-INDUSTRIAL SOCIETY
71:1.00, 71:2.50, 71:7.00

POVERTY
66:11.00

power plants
see PUBLIC UTILITIES

PREFABRICATED HOUSING
72:8.00, 72:19.00
see also CONSTRUCTION INDUSTRY

PREFERENTIAL HIRING
68:4.50 66:47.00

PRINTERS' UNION
65:0.75

PRINTING INDUSTRY
70:1.00, 70:3.00 69:0.75 67:11.00 65:6.00 63:18.50

PRIVATE-PUBLIC RELATIONS
72:10.00 71:1.00, 71:4.90, 71:5.00, 71:6.50 70:3.60, 70:13.40, 70:14.00, 70:17.50, 70:19.00 68:15.00, 68:17.00, 68:18.00, 68:19.50 67:1.00, 67:2.00, 67:6.00, 67:7.00, 67:9.00, 67:10.00 66:0.50, 66:7.00, 66:41.00, 66:44.00, 66:56.00, 66:57.00, 66:58.00, 66:59.00, 66:61.00 65:0.20, 65:0.50, 65:2.00 64:11.00, 64:12.00, 64:12.50, 64:14.00, 64:25.00, 64:30.00, 64:33.00 63:2.00, 63:6.00, 63:15.00 62:2.00

productivity agreements
see WORK RULES

PROFESSIONAL WORKERS
71:3.25, 71:7.00 70:9.30 64:11.00
see also WHITE COLLAR WORKERS

profit sharing
see AUTOMATION FUND
PAY INCENTIVES

programmers
see COMPUTER PROGRAMMERS

PROJECTED TRENDS
73:1.00, 73:3.00 72:1.50, 72:6.50, 72:8.00, 72:10.00, 72:11.00 68:6.00, 68:21.00 67:1.30, 67:2.25, 67:3.00, 67:10.00 63:1.00, 63:8.00, 63:13.00
see also FUTURE TRENDS

PROMOTION OPPORTUNITIES
62:1.00

psychological and sociological effects
see SOCIOLOGICAL AND PSYCHOLOGICAL EFFECTS

PUBLIC EMPLOYEES
65:1.00

PUBLIC EMPLOYMENT PROGRAMS
72:10.00 71:8.25 70:17.00, 70:17.20, 70:20.00 69:2.50, 69:9.00 68:6.00 67:1.00, 67:6.00, 67:10.00, 67:13.00, 67:14.00, 67:25.00 66:7.00, 66:19.00, 66:36.00, 66:41.00, 66:42.00, 66:48.00, 66:52.00, 66:54.00, 66:55.00, 66:61.00 65:4.00, 65:6.60 64:1.00, 64:6.00, 64:8.00, 64:10.00, 64:11.00, 64:13.00, 64:21.00, 64:33.00 63:7.00, 63:10.00

PUBLIC REPRESENTATION IN BARGAINING
72:7.00 71:3.50, 71:4.70, 71:4.75, 71:6.50 70:13.90, 70:17.50,
70:17.55 69:35.00 68:2.00 67:1.00 66:7.00, 66:41.00, 66:42.00,
66:52.00, 66:56.00 65:0.20, 65:0.50, 65:1.00, 65:4.00, 65:6.30,
65:20.50 64:1.00, 64:6.00, 64:8.00, 64:19.00, 64:21.00, 64:24.00,
64:27.00, 64:31.00, 64:33.00 63:1.00, 63:2.00, 63:7.00, 63:9.00

PUBLIC UTILITIES
70:11.00 68:17.00 65:19.00, 65:20.60 62:1.00

PUBLISHING INDUSTRY
62:2.00

RACIAL GROUPS
70:10.00 68:15.00 67:4.00
see also MINORITY GROUP WORKERS
specific groups, e.g. BLACKS

RAILROAD INDUSTRY
72:2.00 71:6.50 70:0.25, 70:19.00 69:7.00, 69:14.00 68:15.00,
68:17.00 67:9.00 65:5.50 64:8.50 63:9.00

referral
see RELOCATION

regional policy
see URBAN-REGIONAL POLICY

REGRESSION
72:5.50, 72:9.00, 72:11.00, 72:17.00 70:9.40, 70:17.55, 70:17.60,
70:17.90 69:17.00, 69:23.00 66:24.00 65:7.00 63:3.00, 63:6.00

rehiring rights
see PREFERENTIAL HIRING

relative factor price
see CAPITAL-LABOR RATIO

RELOCATION, PRIVATE
72:1.60, 72:2.00, 72:4.00, 72:15.00, 72:22.00 71:3.00, 71:7.00, 71:9.00
70:3.00, 70:6.00, 70:8.00, 70:9.00, 70:9.40, 70:10.00, 70:11.00, 70:16.00,
70:19.00 69:2.50, 69:10.40, 69:10.50, 69:14.00, 69:25.00, 69:26.00,
69:29.00, 69:31.00, 69:33.00 68:0.50, 68:0.75, 68:1.00, 68:4.50,
68:14.00, 68:15.00, 68:17.00, 68:19.00, 68:20.00 67:2.50, 67:4.00,
67:6.00, 67:9.00, 67:10.00, 67:12.50, 67:13.75, 67:14.00, 67:17.00, 67:18.00,
67:19.00, 67:20.00, 67:22.25, 67:22.50, 67:23.00 66:0.50, 66:6.00,
66:7.00, 66:12.00, 66:23.50, 66:32.00, 66:33.00, 66:48.00, 66:51.00, 66:56.00,
66:64.00 65:0.50, 65:3.00, 65:4.00, 65:5.50, 65:6.50, 65:10.25, 65:13.00

RELOCATION, PRIVATE (cont.)
64:3.00, 64:6.00, 64:8.00, 64:8.50, 64:10.00, 64:13.00, 64:14.00, 64:19.00,
64:20.00, 64:26.00, 64:27.00, 64:29.00, 64:32.50, 64:35.00 63:1.00,
63:4.00, 63:6.50, 63:8.00, 63:9.00, 63:14.00, 63:16.00, 63:18.00, 63:19.00
61:1.00
see also TRANSFER OPTIONS

RELOCATION, PUBLIC
72:8.00, 72:10.00 71:7.50 70:0.25, 70:13.40, 70:19.00 69:2.00,
69:2.50, 69:8.00, 69:18.00, 69:19.00, 69:29.00 68:1.00, 68:2.00,
68:15.00, 68:18.00 67:1.00, 67:4.00, 67:6.00, 67:8.25, 67:9.00,
67:10.00, 67:13.00, 67:22.00 66:7.00, 66:19.00, 66:20.00, 66:35.00,
66:41.00, 66:42.00, 66:45.00, 66:48.00, 66:52.00, 66:61.00 65:4.00,
65:6.50, 65:6.60, 65:8.50, 65:11.00, 65:20.50 64:6.00, 64:8.00,
64:14.00, 64:18.00, 64:19.00, 64:26.00, 64:26.50, 64:31.00, 64:32.50
63:2.00, 63:6.00, 63:13.00, 63:14.00

RESERVE LABOR POOL
64:7.00

RETAIL FOOD INDUSTRY
65:22.00

RETAIL TRADE INDUSTRY
73:2.00 70:19.00

RETIREMENT
72:10.00 67:25.00 66:19.00, 66:20.00, 66:38.00, 66:41.00, 66:55.00
66:61.00 65:4.00, 65:11.50 64:6.00
see also EARLY RETIREMENT

RETRAINING, PRIVATE
72:1.50, 72:1.60, 72:2.00, 72:4.00, 72:6.50, 72:8.00, 72:10.00, 72:15.00,
72:21.00, 72:22.00 71:2.00, 71:3.00, 71:3.25, 71:3.50, 71:4.60, 71:4.90,
71:5.00, 71:6.25, 71:6.30, 71:7.00, 71:9.00 70:0.10, 70:0.50, 70:0.75,
70:2.00, 70:3.00, 70:3.60, 70:3.65, 70:6.00, 70:6.50, 70:8.00, 70:9.00,
70:9.50, 70:11.00, 70:11.40, 70:11.70, 70:12.00, 70:13.40, 70:15.00, 70:16.00,
70:17.00, 70:17.85, 70:19.00, 70:19.50 69:0.75, 69:2.50, 69:5.00, 69:6.00,
69:8.00, 69:8.50, 69:10.25, 69:10.40, 69:12.00, 69:13.00, 69:14.00, 69:23.00,
69:25.00, 69:26.00, 69:27.00, 69:29.00, 69:31.00, 69:33.00, 69:35.00
68:0.50, 68:1.00, 68:4.50, 68:7.00, 68:8.00, 68:9.00, 68:10.00, 68:14.00,
68:15.90, 68:17.00, 68:19.00, 68:20.00 67:1.30, 67:2.00, 67:2.50, 67:3.00,
67:6.00, 67:7.00, 67:7.50, 67:8.00, 67:9.00, 67:10.00, 67:11.00, 67:12.50,
67:12.75, 67:13.75, 67:14.00, 67:17.00, 67:18.00, 67:19.00, 67:21.00, 67:22.25,
67:22.50, 67:23.00, 67:25.00 66:0.50, 66:1.00, 66:3.00, 66:6.00, 66:7.00,
66:8.00, 66:9.00, 66:12.00, 66:23.00, 66:23.50, 66:24.50, 66:28.00, 66:29.00,
66:31.00, 66:32.00, 66:35.00, 66:41.00, 66:42.00, 66:45.00, 66:46.00, 66:48.00,
66:51.00, 66:54.00, 66:56.00, 66:59.00, 66:61.00, 66:63.00, 66:64.00
65:0.50, 65:3.00, 65:4.00, 65:5.10, 65:5.50, 65:5.70, 65:6.50, 65:9.60,
65:10.00, 65:10.25, 65:10.40, 65:10.75, 65:11.00, 65:13.00, 65:18.00, 65:19.00,
65:19.75, 65:20.00, 65:20.50, 65:20.60, 65:21.00, 65:23.00 64:3.00, 64:6.00,
64:8.00, 64:8.50, 64:9.00, 64:10.00, 64:11.00, 64:13.00, 64:14.00, 64:15.00,
64:18.00, 64:19.00, 64:19.50, 64:20.00, 64:23.00, 64:26.00, 64:27.00, 64:27.50,
64:29.00, 64:32.50, 64:34.50 63:1.00, 63:4.00, 63:5.00, 63:7.00, 63:8.00,

RETRAINING, PRIVATE (cont.)
63:9.00, 63:14.00, 63:15.00, 63:16.00, 63:17.00, 63:18.00, 63:19.00
62:1.00, 62:2.00   61:1.00

retraining, public
see MANPOWER PROGRAMS

REVIEW OF THE LITERATURE
72:9.00, 72:10.00, 72:19.00   71:2.50, 71:9.00   70:0.20, 70:8.00,
70:14.00   69:6.50, 69:10.25, 69:21.00, 69:26.00   68:2.00, 68:6.00,
68:16.00, 68:18.00   67:4.00, 67:9.00   66:19.00, 66:28.00, 66:62.00
65:0.20, 65:6.00, 65:6.60, 65:20.25   64:19.00   63:16.00   62:1.00

RUBBER INDUSTRY
70:9.00   63:9.00   61:1.00

RUBBER TIRE INDUSTRY
66:28.00

rural development
see URBAN-REGIONAL POLICY

Russia
see U.S.S.R.

S.U.B. (SUPPLEMENTAL UNEMPLOYMENT BENEFITS)
72:2.00, 72:13.00   71:3.50, 71:4.25, 71:4.75, 71:6.25, 71:9.00   70:3.00,
70:8.00, 70:9.00, 70:9.50, 70:16.00   69:2.00, 69:10.00, 69:14.00, 69:25.00,
69:31.00   68:15.90, 68:20.00   67:6.00, 67:7.00, 67:12.50, 67:19.00,
67:21.00   66:0.50, 66:6.00, 66:7.00, 66:12.00, 66:32.00, 66:41.00
65:0.50, 65:1.00, 65:4.00, 65:5.50, 65:6.30, 65:14.00   64:3.00, 64:7.00,
64:8.50, 64:10.00, 64:14.00, 64:19.00, 64:31.00, 64:35.00   63:1.00, 63:9.00,
63:18.00   61:1.00

sabbatical leave
see VACATIONS

SAMPLE
73:2.00, 73:3.00   72:6.00, 72:6.50, 72:17.00, 72:20.00   71:8.50
70:1.00, 70:8.00, 70:9.40, 70:11.00, 70:13.00, 70:14.00, 70:15.00, 70:17.55,
70:17.60, 70:17.90   69:4.50, 69:16.00, 69:17.00, 69:23.00, 69:23.50,
69:27.00   68:2.00, 68:9.00, 68:18.00, 68:19.00   67:4.00, 67:8.00,
67:9.00, 67:16.00, 67:19.00, 67:22.50   66:1.00, 66:13.00, 66:18.00,
66:21.00, 66:24.00, 66:25.00, 66:60.00   65:6.00, 65:13.00, 65:19.75,
65:22.00   64:9.00   63:5.50

SEMI-SKILLED WORKERS
73:3.00   70:1.00, 70:19.50   68:18.00   67:9.00   66:21.00, 66:37.00,
66:51.00   64:11.00   62:1.00

SENIORITY
73:1.00 72:1.50, 72:1.60, 72:2.00, 72:4.00, 72:6.50, 72:12.00, 72:22.00
71:3.50, 71:4.25, 71:4.75, 71:6.50 70:9.00, 70:9.50, 70:15.00, 70:16.00
69:10.50, 69:14.00, 69:23.00, 69:26.00, 69:30.50 68:0.75, 68:4.50,
68:5.00, 68:14.00, 68:15.00, 68:17.00, 68:19.00, 68:21.00 67:2.50,
67:5.00, 67:6.00, 67:7.00, 67:12.50, 67:14.00, 67:19.00 66:0.50,
66:1.00, 66:7.00, 66:8.00, 66:12.00, 66:23.50, 66:41.00, 66:47.00, 66:64.00
65:0.50, 65:1.00, 65:4.00, 65:6.50, 65:14.00, 65:18.00, 65:20.60
64:3.00, 64:6.00, 64:8.50, 64:9.00, 64:19.00, 64:27.00, 64:27.50, 64:35.00
63:1.00, 63:7.00, 63:9.00, 63:16.00, 63:18.00, 63:19.00 61:1.00

SENSITIVITY ANALYSIS
72:11.00

SERVICE INDUSTRY
68:18.00 66:25.00

SEVERANCE PAY
73:1.00 72:1.00, 72:2.00, 72:4.00, 72:6.50, 72:12.00, 72:15.00
71:3.00, 71:4.75, 71:9.00 70:3.00, 70:6.50, 70:8.00, 70:9.00, 70:9.40,
70:12.00, 70:16.00, 70:17.20 69:14.00, 69:31.00 68:4.50, 68:5.00,
68:15.00, 68:15.90, 68:19.00, 68:20.00 67:2.00, 67:2.50, 67:6.00, 67:7.00,
67:7.50, 67:10.00, 67:13.75, 67:14.00, 67:17.00, 67:18.00, 67:19.00, 67:21.00
66:0.50, 66:7.00, 66:12.00, 66:32.00, 66:41.00, 66:46.00 65:0.50, 65:3.00,
65:4.00, 65:5.50, 65:20.50, 65:21.30 64:3.00, 64:6.00, 64:8.00, 64:8.50,
64:13.00, 64:14.00, 64:19.00, 64:27.00, 64:35.00 63:9.00, 63:15.00,
63:16.00, 63:18.00, 63:19.00 61:1.00

SHARECROPPERS
67:8.25

SHIPBUILDING INDUSTRY
66:23.50

SHIPPING INDUSTRY
70:0.50 69:10.50 68:5.00
see also MARITIME INDUSTRY

SHORTER WORK WEEK, PRIVATE
73:0.50 72:1.60, 72:2.00, 72:3.00, 72:5.00, 72:18.00, 72:22.00 71:3.00,
71:4.00, 71:7.00 70:3.00, 70:8.00, 70:9.00, 70:9.50, 70:17.00, 70:17.20,
70:19.50 69:14.00, 69:23.00 68:4.00, 68:15.00, 68:15.90, 68:17.00
67:1.30, 67:10.00, 67:19.00, 67:22.50, 67:24.00 66:7.00, 66:20.00,
66:23.50, 66:29.00, 66:32.00, 66:41.00, 66:51.00, 66:55.00, 66:61.00, 66:63.00
65:0.50, 65:4.00, 65:11.00, 65:21.30 64:2.00, 64:3.00, 64:6.00, 64:8.50,
64:10.00, 64:11.00, 64:16.00, 64:19.00, 64:28.00, 64:33.00, 64:35.00
63:1.00, 63:9.00, 63:15.00, 63:16.00, 63:17.00 62:2.00 61:1.00

SHORTER WORK WEEK, PUBLIC
72:5.00 69:18.00 67:13.00 66:7.00, 66:18.00, 66:19.00, 66:20.00,
66:41.00, 66:49.00, 66:51.00, 66:55.00, 66:61.00 65:1.00, 65:4.00
64:6.00, 64:10.00, 64:11.00, 64:13.00, 64:21.00, 64:23.00, 64:24.00
63:12.00 62:2.00

16th and 17th CENTURIES
  69:4.00

SKILL REQUIREMENTS
  73:0.75, 73:3.00   72:1.50, 72:4.00, 72:6.25, 72:8.00, 72:12.00, 72:21.00, 72:22.00   71:2.00, 71:4.60, 71:6.25   70:1.00, 70:3.00, 70:3.55, 70:3.65, 70:6.00, 70:7.25, 70:7.50, 70:8.00, 70:9.00, 70:11.00, 70:12.00, 70:13.20, 70:14.00, 70:19.00, 70:19.50   69:0.75, 69:5.50, 69:6.50, 69:7.00, 69:8.00, 69:10.00, 69:10.25, 69:13.00, 69:18.00, 69:23.00, 69:26.00, 9:27.00   68:0.50, 68:7.00, 68:8.00, 68:9.00, 68:14.00, 68:18.00, 68:19.00, 68:19.50   67:1.00, 67:5.00, 67:8.00, 67:10.00, 67:13.00, 67:13.75, 67:14.00, 67:18.00, 67:22.50, 67:23.00, 67:25.00   66:1.00, 66:4.00, 66:5.00, 66:6.00, 66:8.00, 66:9.00, 66:12.00, 66:14.00, 66:17.00, 66:21.00, 66:23.00, 66:23.50, 66:24.50, 66:27.50, 66:28.00, 66:29.00, 66:31.00, 66:32.00, 66:41.00, 66:45.00, 66:47.00, 66:48.00, 66:49.00, 66:51.00, 66:52.00, 66:58.00, 66:60.00, 66:62.00   65:0.50, 65:0.55, 65:4.00, 65:5.00, 65:6.50, 65:9.30, 65:10.00, 65:10.25, 65:10.40, 65:10.75, 65:11.00, 65:13.00, 65:17.00, 65:19.00, 65:20.00, 65:20.50, 65:21.00   64:2.00, 64:6.00, 64:8.00, 64:9.00, 64:10.00, 64:11.00, 64:12.00, 64:12.50, 64:15.00, 64:17.00, 64:18.00, 64:19.50, 64:20.00, 64:25.00, 64:26.00, 64:26.50, 64:27.00, 64:31.00, 64:32.50, 64:33.00   63:2.00, 63:4.00, 63:5.00, 63:5.50, 63:10.00, 63:11.00, 63:14.00, 63:16.00, 63:18.00, 63:18.50   62:0.50, 62:1.00   61:1.00

skill transferability
  see SKILL REQUIREMENTS

SKILLED WORKERS
  73:3.00   72:14.00, 72:20.00   71:4.50   70:1.00, 70:3.65, 70:8.00, 70:9.00, 70:14.00, 70:19.00, 70:19.50   69:25.00   68:5.00, 68:15.00, 68:17.00, 68:18.00   67:1.00, 67:8.25, 67:9.00, 67:10.00, 67:12.75   66:8.00, 66:21.00, 66:37.00, 66:46.00, 66:60.00   65:0.50, 65:21.60   64:11.00   63:16.00   62:1.00
  see also HIGH SKILLED WORKERS
    LOW SKILLED WORKERS
    SEMI-SKILLED WORKERS

SOCIAL COSTS
  69:22.00

SOCIALISM
  69:22.00   66:40.00   65:8.50

SOCIOLOGICAL AND PSYCHOLOGICAL EFFECTS
  71:1.50, 71:3.10, 71:6.00   70:9.50, 70:11.70, 70:17.50   69:6.50, 69:16.00, 69:30.00   67:16.00, 67:17.00, 67:24.00   66:11.00, 66:49.00, 66:52.00   65:11.00, 65:11.50, 65:13.00, 65:18.50   64:1.00, 64:20.00, 64:21.00   63:4.00   62:0.50

SOUTHEASTERN UNITED STATES
  65:11.00

SOUTHERN UNITED STATES
  67:4.00

Soviet Union
  see U.S.S.R.

STEEL INDUSTRY
  72:6.50   70:8.00, 70:9.00, 70:14.00   68:0.75, 68:15.00, 68:17.00
  67:5.00, 67:9.00   66:12.00   65:5.30   64:7.00, 64:8.50, 64:9.00,
  64:12.50   63:9.00   62:1.00   61:1.00

stevedores
  see LONGSHOREMEN

STRIKE EFFECTIVENESS
  69:10.40   66:50.00, 66:63.00   63:15.00, 63:15.50

strikes
  see LABOR-MANAGEMENT

STRUCTURAL UNEMPLOYMENT
  70:11.70   65:2.00   64:12.00, 64:15.00   63:6.00

supplemental unemployment benefits
  see S.U.B.

SWEDEN
  72:6.25, 72:18.00   71:3.00   68:0.75   67:1.30, 67:1.60, 67:2.50
  66:25.00   64:26.50

TABLES (includes all illustrative materials)
  73:2.00, 73:3.00   72:2.00, 72:6.00, 72:6.50, 72:9.00, 72:11.00, 72:18.00,
  72:20.00   71:3.00, 71:3.50, 71:4.25, 71:4.75, 71:6.25, 71:6.50, 71:7.00
  70:0.10, 70:1050, 70:1.00, 70:3.65, 70:6.00, 70:9.30, 70:13.00, 70:13.40,
  70:17.85, 70:20.00   69:2.50, 69:4.50, 69:8.00, 69:10.00, 69:10.25,
  69:16.00, 69:21.00, 69:23.00, 69:23.50, 69:24:00, 69:27.00, 69:31.00
  68:2.00, 68:4.00, 68:6.00, 68:9.00, 68:13.00, 68:18.00, 68:19.00   67:2.50,
  67:4.00, 67:5.00, 67:8.00, 67:9.00, 67:12.75, 67:14.00, 67:22.00   66:6.00,
  66:7.00, 66:9.00, 66:12.00, 66:13.00, 66:18.00, 66:21.00, 66:23.00, 66:25.00,
  66:28.00, 66:41.00, 66:51.00, 66:56.00, 66:57.00, 66:60.00   65:0.50,
  65:5.00, 65:5.10, 65:5.70, 65:6.00, 65:7.00, 65:10.75, 65:11.50, 65:13.00,
  65:18.00, 65:19.00   64:6.00, 64:9.00, 64:12.00, 64:17.00, 64:20.00,
  64:29.00, 64:34.50   63:3.00, 63:4.00, 63:5.00, 63:6.00, 63:13.00, 63:19.00

teachers
  see EDUCATORS

TECHNICAL OCCUPATIONS
  70:9.25   69:12.00, 69:13.00   66:25.00

technological adjustment pay
  see AUTOMATION FUND
      PAY INCENTIVES

TEEN-AGERS
64:12.00
see also YOUNGER WORKERS

TELEPHONE INDUSTRY
68:4.50

TELEPHONE OPERATORS
68:4.50

TENNESSEE, MEMPHIS
63:5.50

termination procedures
see LAYOFF NOTIFICATION

TEXAS, BAYTOWN, FORT WORTH
67:16.00, 67:17.00 66:46.00 64:29.00

TEXTILE INDUSTRY
73:3.00 71:8.00 69:4.00 68:21.00 67:22.25

THEORETICAL DISCUSSION
73:0.50, 73:0.75 72:4.00, 72:5.75, 72:11.50, 72:13.00, 72:15.00, 72:22.00 71:1.50, 71:2.40, 71:4.25, 71:4.50, 71:4.60, 71:4.90, 71:7.00 70:0.10, 70:0.25, 70:0.50, 70:1.00, 70:1.50, 70:3.50, 70:3.55, 70:3.60, 70:7.50, 70:11.70, 70:14.00, 70:17.00 69:5.00, 69:7.00, 69:9.50, 69:25.00, 69:28.00, 69:34.00 68:4.00, 68:10.00, 68:14.00 67:1.30, 67:2.25, 67:3.00, 67:13.00, 67:13.75, 67:14.00, 67:21.00 66:2.00, 66:5.00, 66:6.00, 66:7.00, 66:8.00, 66:9.00, 66:16.00, 66:18.00, 66:20.00, 66:21.00, 66:26.00, 66:35.00, 66:36.00, 66:38.00, 66:39.00, 66:41.00, 66:45.00, 66:50.00, 66:64.00 65:4.00, 65:6.00, 65:8.50, 65:9.30, 65:9.70, 65:11.00 64:1.00, 64:11.00, 64:13.00, 64:15.00, 64:19.50, 64:21.00, 64:23.00, 64:26.50, 64:30.00, 64:34.00 63:2.00, 63:11.00, 63:17.00

THEORETICAL MODEL
72:9.00, 72:11.00 70:1.50, 70:2.00, 70:3.65, 70:17.90 69:0.85, 69:17.00 68:9.00, 68:13.00 67:8.25, 67:12.00 65:19.50, 65:21.60

thermal power stations
see PUBLIC UTILITIES

third party arbitrator
see MEDIATOR

TOMATO HARVESTERS
70:13.40

training
see RETRAINING

TRANSFER OPTIONS
71:2.00, 71:9.00 70:0.50, 70:6.00, 70:9.00, 70:9.40, 70:9.50, 70:16.00, 70:19.00 69:10.25, 69:25.00, 69:33.00 68:0.75, 68:19.00 67:6.00, 67:18.00, 67:22.25 66:0.50, 66:46.00, 66:63.00 65:20.60 63:15.00, 63:18.00
see also RELOCATION

TRANSPORTATION INDUSTRIES
71:4.70 69:4.50, 69:7.00

TRUCKING INDUSTRY
71:4.75

TYPOGRAPHICAL UNION
67:11.00 65:1.00

U.S.S.R.
72:14.00 71:7.50 70:0.25 69:10.25, 69:18.00, 69:19.00 66:31.00 65:8.50

underdeveloped countries
see LESS DEVELOPED COUNTRIES

uneducated workers
see LOW EDUCATED WORKERS

UNEMPLOYED WORKERS
65:18.50 64:1.00

UNEMPLOYMENT
72:1.75, 72:2.00, 72:5.75, 72:8.00, 72:10.00, 72:11.00, 72:15.00 71:3.00, 71:6.50, 71:7.00, 71:8.00 70:0.10, 70:0.50, 70:3.00, 70:3.65, 70:8.00, 70:9.00, 70:10.00, 70:12.00, 70:13.40, 70:14.00, 70:16.00, 70:17.20, 70:17.50, 70:19.00, 70:20.00 69:2.50, 69:6.50, 69:8.00, 69:8.50, 69:14.00, 69:23.00, 69:25.00 68:4.00, 68:9.00, 68:13.00, 68:14.00, 68:15.00, 68:17.00, 68:18.00, 68:19.00, 68:19.25, 68:21.00 67:1.00, 67:2.50, 67:4.00, 67:6.00, 67:7.00, 67:8.00, 67:8.25, 67:9.00, 67:10.00, 67:11.00, 67:14.00, 67:17.00, 67:18.00, 67:21.00 66:0.50, 66:5.00, 66:7.00, 66:11.00, 66:16.00, 66:17.00, 66:23.00, 66:24.00, 66:33.00, 66:34.00, 66:41.00, 66:45.00, 66:46.00, 66:48.00, 66:49.00, 66:51.00, 66:52.00, 66:53.00, 66:55.00, 66:58.00, 66:60.00, 66:64.00 65:4.00, 65:5.00, 65:6.60, 65:7.00, 65:9.30, 65:9.60, 65:9.70, 65:13.00, 65:17.00, 65:18.00, 65:18.50, 65:20.50, 65:23.00 64:1.00, 64:6.00, 64:8.00, 64:10.00, 64:11.00, 64:12.00, 64:13.00, 64:19.00, 64:25.00, 64:26.00, 64:29.00, 64:30.00, 64:31.00, 64:32.50, 64:34.50, 64:36.00 63:6.00, 63:6.50, 63:7.00, 63:8.00, 63:10.00, 63:12.00, 63:13.00, 63:17.00, 63:19.00 62:1.00, 62:2.00

UNEMPLOYMENT COMPENSATION
70:0.25, 70:0.50, 70:8.00 69:2.50, 69:8.50 68:1.00, 68:2.00, 68:17.00, 68:18.00, 68:21.00 67:1.00, 67:6.00, 67:9.00, 67:10.00, 67:17.00 66:20.00, 66:29.00, 66:41.00, 66:45.00 65:0.50, 65:1.00, 65:4.00, 65:6.50, 65:6.60, 65:18.50 64:6.00, 64:10.00, 64:14.00, 64:19.00, 64:34.50 62:2.00

UNION JURISDICTION
71:4.70 67:11.00 66:50.00 65:11.00 64:26.00

union-management cooperation
see LABOR-MANAGEMENT COOPERATION

UNION-MANAGEMENT POWERS
73:3.00 72:6.25, 72:6.50, 72:12.00, 72:15.00 71:3.00, 71:3.50, 71:4.25, 71:4.70, 71:4.75, 71:6.30, 71:6.50, 71:8.25 70:1.00, 70:2.00, 70:3.00, 70:8.00, 70:9.00, 70:15.00, 70:16.00 69:10.00, 69:25.00 68:1.00, 68:2.00, 68:17.00, 68:18.00, 68:19.00, 68:20.00 67:7.00, 67:11.00 66:17.00, 66:22.00, 66:26.00 65:0.20, 65:1.00, 65:3.00, 65:6.30, 65:22.00 64:7.00, 64:8.50, 64:19.00, 64:33.00, 64:34.25, 64:35.00 63:1.00, 63:7.00, 63:9.00, 63:15.50, 63:16.00, 63:18.50

UNION MERGERS
70:3.00
see also MULTICRAFT UNIONS

union representation
see LABOR-MANAGEMENT COOPERATION

UNIONS
73:1.00, 73:3.00 72:1.60, 72:3.00, 72:4.00, 72:6.50, 72:12.00, 72:15.00, 72:16.00, 72:17.00, 72:19.00, 72:22.00 71:0.50, 71:3.00, 71:3.50, 71:4.00, 71:4.25, 71:4.70, 71:4.75, 71:4.90, 71:8.25, 71:9.00 70:3.50, 70:8.00, 70:9.50, 70:11.40, 70:13.90, 70:15.00, 70:17.00, 70:17.20, 70:17.55 69:0.75, 69:7.00, 69:8.00, 69:8.50, 69:9.50, 69:10.00, 69:10.40, 69:12.00, 69:14.00, 69:25.00 68:1.00, 68:2.00, 68:7.00, 68:15.00, 68:16.00, 68:17.00, 68:20.00 67:1.60, 67:2.25, 67:7.00, 67:12.50, 67:22.50 66:32.00, 66:40.00, 66:50.00, 66:51.00, 66:52.00, 66:54.00, 66:63.00 65:0.20, 65:0.50, 65:0.75, 65:1.00, 65:4.00, 65:5.20, 65:5.70, 65:6.30, 65:9.60, 65:11.00, 65:14.00, 65:16.00, 65:18.00, 65:19.50, 65:20.60, 65:21.00, 65:21.60 64:2.00, 64:6.00, 64:7.00, 64:8.50, 64:10.00, 64:16.00, 64:19.00, 64:33.00, 64:34.25, 64:35.00 63:1.00, 63:7.00, 63:8.00, 63:9.00, 63:12.00, 63:15.00, 63:15.50, 63:16.00, 63:17.00, 63:18.00, 63:18.50 62:2.00

UNITED AUTO WORKERS
69:2.00 65:1.00, 65:11.00

UNSKILLED WORKERS
73:3.00 72:14.00 71:5.00 70:1.00, 70:3.65, 70:8.00, 70:9.00, 70:14.00, 70:19.00, 70:19.50, 70:20.00 69:2.50, 69:25.00 68:4.00, 68:5.00, 68:15.00, 68:17.00, 68:18.00 67:1.00, 67:3.00, 67:8.25, 67:9.00, 67:10.00 66:21.00, 66:24.00, 66:37.00, 66:46.00, 66:51.00 64:11.00 62:1.00

URBAN-REGIONAL POLICY
  70:8.00, 70:14.00, 70:18.50   69:18.00   68:15.00   67:1.00, 67:4.00,
  67:6.00   66:7.00, 66:18.00, 66:21.00, 66:41.00, 66:42.00, 66:55.00,
  66:61.00   65:4.00, 65:6.50, 65:8.50, 65:10.25, 65:11.00, 65:17.00
  64:1.00, 64:6.00, 64:10.00, 64:19.00, 64:23.00   63:2.00, 63:6.00,
  63:10.00, 63:13.00

UTAH, SALT LAKE COUNTY
  65:6.00

utilities
  see PUBLIC UTILITIES
      TELEPHONE INDUSTRY

VACATIONS
  71:2.00   70:3.00, 70:17.20   68:15.90, 68:20.00   67:19.00   66:12.00,
  66:23.00, 66:55.00   65:1.00, 65:4.00   64:8.50, 64:10.00, 64:27.00

values
  see SOCIOLOGICAL AND PSYCHOLOGICAL EFFECTS

VARIANCE-COVARIANCE ANALYSIS
  66:13.00

VIRGINIA
  69:16.00

VOCATIONAL EDUCATION
  71:4.50   70:7.25, 70:9.25, 70:11.70   69:8.00, 69:13.00, 69:23.00
  68:4.00   67:1.30, 67:3.00   66:45.00   63:6.50
  see also EDUCATION

vocational guidance
  see COUNSELING

W.P.A. Programs
  see PUBLIC EMPLOYMENT PROGRAMS

wage and price controls
  see INCOME POLICY

WAGE EFFECTS
72:5.75, 72:8.00, 72:11.50, 72:12.00, 72:14.00   71:0.50, 71:4.00, 71:4.25
70:3.50, 70:6.00, 70:9.00, 70:13.40, 70:14.00, 70:16.00, 70:17.60, 70:19.00
69:8.00, 69:10.00, 69:18.00, 69:27.00, 69:28.00   68:2.00, 68:14.00,
68:17.00, 68:19.00 , 67:10.00, 67:12.75   66:6.00, 66:8.00, 66:19.00,
66:23.00, 66:23.50, 66:33.00, 66:38.00   65:1.00, 65:13.00, 65:19.50,
65:20.60   64:11.00, 64:15.00, 64:26.50, 64:35.00   63:6.00, 63:15.50
62:0.50, 62:2.00

wage fund
see AUTOMATION FUND

wage guarantee
see G.A.W.

wage structure
see PAY INCENTIVES
PAYGRADES

WEST GERMANY
72:6.25, 72:6.50   70:3.00   71:3.00   69:10.25   68:19.25   67:2.00,
67:2.50   66:25.00

WESTERN EUROPE
72:8.00   68:13.00   67:22.50   66:25.00   63:14.00
see also EUROPE

WESTERN UNITED STATES
67:4.00

WHITE COLLAR UNIONIZATION
73:1.00   71:4.90   70:0.50, 70:8.00, 70:13.00, 70:15.00, 70:17.00
68:8.00, 68:15.00, 68:19.25   66:10.00, 66:29.00, 66:32.00, 66:50.00,
66:63.00   64:2.00   63:15.50

WHITE COLLAR WORKERS
73:1.00, 73:3.00   72:15.00   71:4.50   70:1.00, 70:1.50, 70:8.00,
70:9.00, 70:11.00, 70:15.00, 70:17.85   69:6.00   68:15.00, 68:17.00,
68:19.25   67:4.00, 67:10.00, 67:22.50   66:10.00   64:11.00   63:5.50
see also PROFESSIONAL WORKERS

WOMEN
73:2.00   72:1.50, 72:10.00   70:10.00, 70:13.00, 70:19.50   69:26.00
68:6.00, 68:19.00, 68:21.00   66:25.00   64:2.00, 64:9.00   63:11.00

WORK ATTITUDES
71:8.50   69:26.00, 69:30.00

work environment
see WORKING CONDITIONS

work hours
see HOURS OF WORK

WORK RELATIONSHIPS
72:3.00, 72:5.00, 72:6.00, 72:15.00 71:2.40, 71:4.60, 71:8.50 70:1.00, 70:8.00, 70:9.00, 70:11.00, 70:11.40, 70:12.00, 70:14.00, 70:15.00, 70:16.00, 70:18.00, 70:19.00 69:21.00, 69:23.00, 69:26.00, 69:27.00, 69:30.00 68:14.00, 68:17.00, 68:18.00, 68:19.00 67:1.00, 67:1.60, 67:4.00, 67:5.00, 67:6.00, 67:7.00, 67:8.00, 67:10.00 66:4.00, 66:37.00 65:0.50, 65:0.55, 65:1.00, 65:3.00, 65:5.10 64:26.00, 64:27.50 63:7.00, 63:9.00, 63:15.50 62:1.00

WORK RULES
73:0.25 72:1.00, 72:1.50, 72:2.00, 72:3.00, 72:4.00, 72:5.00, 72:6.50, 72:12.00, 72:16.00 71:3.00, 71:3.50, 71:4.00, 71:4.25, 71:4.90, 71:7.00 70:0.25, 70:3.75, 70:6.00, 70:8.00, 70:9.00, 70:9.50, 70:15.00 69:7.00, 69:10.00, 69:10.50, 69:14.00, 69:23.00, 69:35.00 68:5.00, 68:15.00, 68:16.00, 68:17.00, 68:18.00, 68:19.00, 68:20.00 67:4.00, 67:9.00, 67:12.50 66:4.00, 66:12.00, 66:17.00, 66:22.00, 66:32.00, 66:33.00, 66:35.00, 66:54.00 65:0.20, 65:0.50, 65:0.75, 65:1.00, 65:3.00, 65:4.00, 65:5.20, 65:5.30, 65:5.50, 65:6.30, 65:10.50, 65:14.00, 65:18.00, 65:19.50, 65:21.60, 65:22.00 64:3.00, 64:10.00, 64:12.50, 64:19.00, 64:30.00 63:7.00, 63:9.00, 63:15.00, 63:16.00, 63:18.50 62:2.00 61:1.00

WORK SHARING
72:5.00 71:4.00 68:14.00, 68:20.00 67:6.00, 67:7.50, 67:9.00, 67:10.00, 67:21.00 66:1.00, 66:7.00, 66:20.00, 66:23.00, 66:31.00, 66:63.00 65:11.00, 65:20.50 64:19.00, 64:33.00 63:9.00 62:2.00 61:1.00

WORK TIME
70:1.00, 70:8.00, 70:9.00, 70:11.00, 70:19.00 68:14.00, 68:17.00, 68:19.00 66:2.00, 66:55.00 65:1.00 64:3.00, 64:11.00 61:1.00

work values
see WORK ATTITUDES

worker alienation
see ALIENATION OF WORKERS

workers
see specific groups, e.g. OLDER, MINORITY GROUP, CLERICA. WHITE COLLAR, etc.

WORKING CONDITIONS
73:0.50 72:3.00, 72:5.00, 72:7.00, 72:8.00, 72:12.00, 72:18.00, 72:22.00 71:8.50 70:3.55, 70:19.50 69:2.50, 69:26.00 68:2.00 67:2.50, 67:5.00, 67:22.50 66:39.00, 66:62.00 64:11.00, 64:19.50, 64:20.00 63:15.50

YOUNGER WORKERS
71:5.00, 71:8.25 70:11.70 69:16.00, 69:26.00 68:4.00, 68:6.00 67:22.50 66:21.00, 66:25.00, 66:32.00, 66:51.00 65:4.00 64:12.00, 64:29.00
see also TEEN-AGERS

YUGOSLAVIA
66:18.00

73:0.25

TITLE: "Automation Halts the St. Louis Dailies"
PUBLICATION: Business Week, September 1, 1973, p. 19.
KEY WORDS: Adjustments; Micro, Firm, Case Study, Missouri, St. Louis, Newspaper Industry, Employment, Work Rules; Private Policy (Attrition, Job Content); Descriptive (Ongoing Trends); Footnotes (None), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A report of a Teamster strike as a result of automation at a newspaper printing plant in St. Louis, Missouri. Methodology — The article is a magazine report of the basic issues as reported by management and labor. Main Conclusions — The Teamster's Union feels that management has increased work loads by attempting to decrease the work force too much. Managements says the reduced employment via attrition is not increasing work loads for Teamsters and that the extra workers are merely sitting around.

73:0.50

TITLE: "Flexible Work Scheduling: Beyond the Forty-Hour Impasse"

AUTHOR: Fred Best

PUBLISHER: Chapter 9 in Fred Best, ed. The Future of Work, Englewood Cliffs, N.J. Prentice-Hall, 1973, pp. 93-99.

KEY WORDS: Adjustments; Micro, Leisure, Working Conditions; Private Policy (Flexible Work Scheduling, Shorter Work Week); Theoretical Discussion; Footnotes (None), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A discussion of flexible work scheduling and its benefits to different types of people. Methodology — Possible ways of restructuring time at work are discussed. Major Conclusions — Flexible work scheduling will allow a better match of individual needs and preferences of workers to the goals and constraints of work organizations. Increased individualization in all aspects of life is becoming desirable and flexible work scheduling is one way of meeting individual needs.

73:0.75

TITLE: "Evolution of the Knowledge Worker"
AUTHOR: Peter Drucker
PUBLISHER: Chapter 5 in Fred Best, ed. The Future of Work, Englewood Cliffs, N.J. Prentice-Hall, 1973, pp. 58-63. Abridged from Peter F. Drucker, The Age of Discontinuity, New York, Harper and Row, 1968, pp. 263-68, 272-77.
KEY WORDS: Adjustments; Knowledge Workers, Employment, Skill Requirements, Labor Mobility; Private Policy (Apprenticeship), Public Policy (Education); Theoretical Discussion; Footnotes (None), Bibliography (None); Abstract.
ABSTRACT: Scope and Level — A discussion of knowledge workers and their role in the economy of the future. Methodology — Fundamentals of the knowledge economy are discussed. Major Conclusions — Knowledge work, the production and distribution of ideas and information, does not lead to a disappearance of work. The typical worker of the advanced knowledge economy is working more and more. Knowledge does not eliminate skill. It is, on the contrary, becoming the foundation for skill, enabling new skills to be acquired quickly and with less effort than in the past. Knowledge enables individuals to have more choice in their career development. Access to education is becoming the right of everyone.

Knowledge opportunities exist primarily in large organizations. The challenge of the future is to make knowledge work live up to the expectations of those highly educated people who are undertaking it. They are employees and successors to the skilled workers of the past but are trained at a professional level and must be challenged and permitted performance at that level.

73:1.00

TITLE: "Professionals Go Union"
AUTHOR: Jack Golodner
PUBLISHER: The American Federationist, Vol. 80, No. 10, October 1973, pp. 6-8.
KEY WORDS: Adjustments; Micro, White Collar Workers, Unions; Private Policy (White Collar Unionization, Seniority, Pension Rights, Severance Pay), Public Policy (Manpower Programs, Education), Descriptive (Ongoing Trends, Projected Trends); Footnotes (None), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A discussion of the trend toward unionization among professionals. Methodology — A discussion of the trends in professional fields which are making unionization more desirable for groups who had previously scorned such activity. Major Conclusions — Increasing size and bureaucratization in industry, education, and government have tended to remove professionals from control over their own destinies and to diminish their dignity. They are increasingly deciding that they must unionize to ensure their rights, their status, and their security and to have a voice in shaping their destiny.

In 1970 according to the Department of Labor 22 percent of the union members engaged in collective bargaining, or 5 million workers, were in the white collar category.

73:2.00

TITLE: Upward Mobility in the Internal Labor Market: A Case Study in Three Industries.

AUTHOR: Edward Steinberg

PUBLISHER: A paper prepared for presentation at the annual meeting of the Western Economic Association, Claremont, California, August, 1973, Mimeograph.

KEY WORDS: Adjustments; Micro, Macro, Case Study, Apparel Manufacturing, Retail Trade Industry, Banking, New York, Occupational Structure, Women, Blacks, Labor Mobility, Internal Labor Market; Empirical (Table, Sample, Cases); Footnotes (Moderate), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A study of upward labor mobility within internal labor markets. Methodology — Upward labor mobility in three industries in New York between 1965 and 1970 is examined. Major Conclusions — There is discrimination against women and blacks in the promotion process. Flat occupational structure in an industry limits upward mobility, however, these limitations are greatest on women and blacks.

73:3.00

TITLE: "Modernization and Manpower In Textile Mills"
AUTHOR: Rose N. Zeisel
PUBLISHER: Monthly Labor Review, Vol. 96, No. 6, June 1973.
KEY WORDS: Adjustments; Historical, Textile Industry, Blue Collar Workers, White Collar Workers, Unskilled Workers, Semi-Skilled Workers, Skilled Workers, Employment, Union-Management Powers, Blue Collar-White Collar, Unions, Job Content, Hours of Work; Private Policy (Attrition, Job Content, Skill Requirements); **Empirical** (Table, Sample), Descriptive (Ongoing Trends, Projected Trends); Footnotes (Moderate), Bibliography (None); No Abstract.

72:1.00

TITLE: "Emergency Disputes: Recent British and American Experience"
AUTHOR: Benjamin Aaron
PUBLISHER: Industrial Relations Research Association, Proceedings of the Twenty-Fifth Anniversary Meeting, December 28-29, 1972, pp. 1-14.
KEY WORDS: Adjustments; Micro, Longshoremen, Collective Bargaining, Job Security, Labor-Management; Private Policy (Severance Pay, Work Rules); Descriptive (Cases, Past Trends, Ongoing Trends); Footnotes (Few), Bibliography (None); No Abstract.

72:1.50

TITLE: "Women Who Work in Factories"
AUTHOR: Judith B. Agassi
PUBLISHER: *Dissent*, Vol. 19, No. 1, Winter 1972, pp. 233-279.
KEY WORDS: Adjustments; Macro, Women, Employment, Skill Requirements, Work Rules, Private Policy (Retraining, Job Security, Job Content, Seniority, Pension Rights), Public Policy (Legislation, Day-Care, Community Cooperation); Descriptive (Past Trends, Ongoing Trends, Projected Trends); Footnotes (None), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A loose macro discussion of the female industrial worker's position in backward and inferior skill industries. Methodology — A descriptive analysis of automation's impact upon female employment in an environment of traditional work norms and low trained jobs. Developed from past and present trends new policies are concerning technical upgrading, retirement and female labor market expansion. Major Conclusion — There is a need for a campaign for resolute upgrading of technology, demanding guarantees that women employees will be trained for the new upgraded jobs.

Presently, new automated industries are creating many new jobs but, women are in danger of losing their work place because they only possess inferior skills and are concentrated in industrys' most backward sections. To remedy this, the private sector must provide greater labor mobility through the rigid and accepted norms of the so-called man's job, by allowing technical training, whenever automation is present. Work norms must provide working women equality in seniority, pension rights, job security, promotion and training throughout the older industrial craft skills.

Public policy responses are 1) adaptive legislation toward the rights and security of working women, and 2) establishing a full range of community services as achieved in Western Europe. Day care service progress has been limited to metropolitan centers and is still too expensive for the average working mother. Redirection must include the average working female and not be limited to welfare mothers.

The authors indicate successful implementation means more female workers and more jobs created in community service with a beneficial effect of a more rational distribution of the burden of social services and social security in a society with a rapidly growing retired population.

72:1.60

TITLE: "Implications for the United States"
AUTHOR: Jack Barbash and Kate Barbash
PUBLISHER: Chapter 9 in Trade Unions and National Economic Policy, Baltimore and London, John Hopkins Press, 1972.
KEY WORDS: Adjustments; Macro, Unions, Collective Bargaining; Private policy (Layoff Notification, G.A.W., Shorter Work Week, Fringe Benefits, Pension Rights, Seniority, Retraining, Relocation); Descriptive (Past Trends, Ongoing Trends); Footnotes (Moderate), Bibliography (Small); No Abstract.

72:1.75

TITLE: "The Black Worker's Future Under American Capitalism"
AUTHOR: Carl Bloice
PUBLISHER: The Black Scholar, Vol. 3, No. 9, May 1972, pp. 14-22.
KEY WORDS: Adjustments; Macro, Blacks, Low Skilled Workers, Unemployment, Multinational Firms; Public Policy (Nationalization of Industry); Descriptive (Past Trends, Ongoing Trends); Footnotes (None), Bibliography (None); No Abstract.

72:2.00

TITLE: Railroad Technology and Manpower in the 1970's
AGENCY: Bureau of Labor Statistics, U.S. Department of Labor, Bulletin 1717
PUBLISHER: Washington, U.S. Government Printing Office, 1972.
KEY WORDS: Adjustments; Micro, Railroad Industry, Employment, Unemployment, Collective Bargaining; Private Policy (Seniority, Relocation, Retraining, Severance Pay, Work Rules, Pension Rights, S.U.B., G.A.W., Attrition, Early Retirement, Shorter Work Week, Paygrades, Layoff Notification, Job Security); Empirical (Tables, Cases); Footnotes (Moderate), Bibliography (Large); Abstract.
ABSTRACT: Scope and Level — A study of technology adopted by the railroads and implications for manpower needs in the 1970's. Methodology — Technological changes in the railroad industry are described and the effects of these changes on employment are discussed. A section is devoted to methods of worker adjustment to technological change. Major Conclusions — Employment levels in the railroad industry are declining but there are job openings as a result of retirement. The unemployment rate is lower than for the economy as a whole in part a result of prevailing worker adjustment provisions found in union-management agreements.

Successful adjustment mechanisms include advance notice of major change, moving allowances for relocation, retraining rights and benefits, various guarantees of job security, and unemployment and retirement benefits.

72:3.00

TITLE: "An Organization of People"
AUTHOR: J. Champagne
PUBLISHER: Industrial Relations Research Association, Proceedings of the Twenty-Fifth Anniversary Meeting, December 28-29, 1972, pp. 129-136.
KEY WORDS: Adjustments; Micro, Unions, Labor-Management, Working Conditions, Job Content, Earnings, Job Satisfaction, Work Relationships; Private Policy (Flexible Work Scheduling, Planning, Shorter Work Week, Paygrades, Labor-Management Cooperation, Work Rules); Descriptive (Ongoing Trends); Footnotes (None), Bibliography (None); Abstract.
ABSTRACT: Scope and Level — An examination of ways to adapt jobs to human needs. Methodology — A discussion of possible ways to adapt jobs to human needs including examples with which the author's industry had experimented. Major Conclusions — Several successful methods of adapting jobs to increase workers' job satisfaction were described. Abolishing time clocks, putting quality control in the hands of production workers, and putting workers on salary resulted in greater quality in the work done and less absenteeism in one plant. A team approach to work in which workers rotated jobs was found to be successful in another. Bringing unions into decision making roles concerning major new equipment was also found to ease resistence to new technology. If enough time is taken by management to adopt changes and communication channels remain open, it will be easier for the workers to adjust accordingly.

TITLE: "Job Security"
AUTHOR: Harold W. Davey
PUBLISHER: Chapter 9 in Harold Davey, Contemporary Collective Bargaining, 3rd ed., Englewood Cliffs, N.J., Prentice-Hall, 1972, pp. 215-249.
KEY WORDS: Adjustments; Micro, Unions, Collective Bargaining, Employment, Job Security, Labor-Management; Private Policy (Seniority, Retraining, Relocation, Severance Pay, Attrition, Early Retirement, Work Rules, Skill Requirements); Theoretical Discussion, Descriptive (Ongoing Trends); Footnotes (Few), Bibliography (Large); Abstract.

ABSTRACT: Scope and Level — A discussion of job security and collective bargaining. Methodology — Ways in which unions, through collective bargaining, can fairly ensure job security for their members are discussed. Major Conclusions — If workers are displaced by technological change or any other just reason and are subsequently transfered to another plant some means should be provided for the transfer of their seniority.

Collective bargaining plays a vital role in successful adjustment to technological change. Unions and management must work out problems relating to work rules and manpower requirements. It is not in the best interest of unions or the economy as a whole to insist on outmoded work practices. Compromises should be reached to ensure efficiency in production.

In general, joint policies ensuring clarity, consistency, predictability, and equality of treatment in like circumstances must be clearly spelled out.

72:5.00

TITLE: "Quality of Working Life: National and International Developments"
AUTHOR: Louis E. Davis
PUBLISHER: Industrial Relations Research Association, Proceedings of the Twenty-Fifth Anniversary Meeting, December 28-29, 1972, pp. 121-128.
KEY WORDS: Adjustments; Micro, Macro, Job Content, Job, Satisfaction, Work Relationships, Working Conditions; Private Policy (Shorter Work Week, Work Sharing, Flexible Work Scheduling, Paygrades, Working Conditions, Work Rules), Public Policy (Shorter Work Week, Planning); Descriptive (Ongoing Trends); Footnotes (Few), Bibliography (Moderate); No Abstract.

72:5.50

TITLE: "Learning and Productivity Change in Metal Products"
AUTHOR: I. Dudley
PUBLISHER: American Economic Review, Vol. 62, No. 4, September 1972, pp. 662-669.
KEY WORDS: Adjustments; Micro, Columbia, Metal Products; Empircal (Regression);
Footnotes (None), Bibliography (Medium); No Abstract.

72:5.75

TITLE: Employment Policy at the Crossroads
AUTHOR: William Fellner
PUBLISHER: American Enterprise Institute for Public Policy Research, Washington D.C., Domestic Affairs Study 9, December 1972.
KEY WORDS: Adjustments; Macro, Employment, Unemployment, Wage Effects; Public Policy (Full Employment, Fiscal Policy, Monetary Policy, Manpower Programs); Theoretical Discussion; Abstract.

ABSTRACT: Scope and Level — A discussion of the inflation-unemployment dilemma and ways of coping with it. Methodology — A theoretical discussion is developed based on statistics for the fifties and seventies of various categories of the labor force (e.g. white males, married males).

Major Conclusions — The author suggests that, in the early 1970's, the market for the most demanded labor categories will be as tight at an overall unemployment rate of about 5 percent as it was in the mid-1950's at a rate of about 4 percent. Trying to achieve the earlier 4 percent target by expansionary monetary and fiscal policies would gravely risk a revival of accelerating inflation. What other methods are available for reducing the unemployment of the specific groups with high unemployment rates to the level at which these specific rates would normally be at an overall rate of about 4 percent? Could less successful manpower programs be refocused to achieve this objective? Could a second-best solution be attempted, taking account of the characteristics of the labor force and the wage structure which change only gradually? If this effort is not successful, will the country be on the road to subsidizing idleness by welfare-type payments on an increasing scale?

The author believes that significant risks would be involved in relying on expansionary monetary and fiscal policies for reducing the overall unemployment rate below about 5 percent. He is skeptical of the present conventional methods of constructing the full employment budget and for estimating the economy's "potential" output. They have deflected attention from the fact that the highest sustainable level of activity depends essentially on the specific types of resources available, on the structure of wages, prices and taxes, and on the types of government expenditure undertaken.

72:6.00

TITLE: "Technology and Social Behavior of Workers in Four Countries: A Sociotechnical Perspective"
AUTHOR: William H. Form
PUBLISHER: American Sociological Review, Vol. 37, No. 6, December 1972, pp. 727-738.
KEY WORDS: Adjustments; Micro, Automobile Industry, U.S., Chili, Italy, Alienation, India, Work Relationships, Job Satisfaction; Empirical (Table, Sample); Footnotes (Moderate), Bibliography (Medium); Abstract.

ABSTRACT: Scope and Level — This study argues that the social effects of industry are similar wherever their technologies are similar. The main hypothesis is that workers exposed to similar technologies, whatever their previous socialization, local culture, or society's level of industrialization, will respond to that technology similarly. Methodology — The automobile industry was studied in four nations differing in degree of industrialization. Workers who worked with comparable levels of technology in each of the four plants were studied. Major Conclusions — This research found that the quantity and quality of social interaction in all four plants was high and most workers were satisfied with their jobs and with contacts with fellow workers. The evidence here leads to the conclusion that, whatever the level of industrialization and whatever their past exposure to industry, workers responses to the work situation are strongly conditioned by technology. That is, the social world of the factory worker everywhere is conditioned primarily by the factory's technological environment.

The more workers controlled their machines and the greater the density of their workplaces the greater their chance for social interaction, and the more they took advantage of that chance.

This study of automobile workers in four countries shows no direct relation between social relations in the factory and feelings of anomie. Evidence mounts that technological explanations of worker alienation should be modified or abandoned.

72:6.25

TITLE: Collective Bargaining and the Challenge of New Technology
AUTHOR: Karl Gunther
PUBLISHER: Geneva, International Labor Office, 1972.
KEY WORDS: Adjustments; Micro, Labor-Management, Case Studies, Canada, France, Germany, Japan, Sweden, Great Britain, U.S., Collective Bargaining, Union-Management Powers, Skill Requirements; Private Policy (Labor-Management, Skill Requirements, Job Security); Descriptive (Cases, Ongoing Trends); Abstract.
ABSTRACT: Scope and Level — Study designed to provide a descriptive survey of selected collective agreements in industrially advanced countries (Canada, France, Germany, Japan, Sweden, Great Britain and U.S.), concentrating on agreements which show a response to the introduction of technological change. Presents examples of approaches to the social and economic issues created by technological change. Methodology — An analysis of two kinds of agreements, the first comprehensive or multi-section agreements, adopted in a particular industry, establishment or region negotiated as a reaction to technological change. The second are agreement clauses negotiated to meet problems arising from new technology; these are examined by category reflecting the kinds of problems with which they deal.

The study covers the following areas: job security, employment continuity, income security, development of skills, and labor-management cooperation.

72:6.50

TITLE: Job Control and Union Structure
AUTHOR: Richard Herding
PUBLISHER: A study on plant-level industrial conflict in the United States with a comparative perspective on West Germany, Rotterdam University Press, 1972.
KEY WORDS: Adjustments; Micro, Automobile Industry, Steel Industry, West Germany, Collective Bargaining, Unions, Union-Management Powers; Private Policy (Seniority, Retraining, Severance Pay, Job Security, Work Rules); Empirical (Table, Sample), Descriptive (Past Trends, Ongoing Trends, Projected Trends); Footnotes (Many), Bibliography (Large); Abstract.

ABSTRACT: Scope and Level — A comparison of workers' job control in the U.S. by means of collective bargaining and countervailing power, and in Germany, by means of joint management and codetermination. Industrial relations in the U.S. is the major focus of the book. Methodology — The history of labor relations in the U.S., especially in the automotive and steel industries, is discussed along with empirical results of the amount of job control won by workers in major labor-management agreements. Union gains in these agreements are assessed relative to gains, or retention of existing power, made by management. The process of codetermination in Germany is described and the worker's position in Germany resulting from that system is discussed relative to the workers position in the U.S. Major Conclusion — Contrary to the criticism by many in the U.S., it was found that codetermination and joint management does provide for some degree of job control, although job control is not a major goal of such a system. In order to have a maximum of job control in a collective bargaining situation there must be union-management relations, democracy within the union (a factor which has been somewhat absent from American unions in recent years), and organizing policy (a clearly defined union policy determining the goals of the bargaining and, thus, a policy of job security). For offensive job control, neither countervailing power nor joint participation alone provide an adequate institutional framework.

Union democracy is an essential determinant of job control especially for young workers. Unless the decision to concur with technological progress is prevented beforehand (which is a question of effective union democracy), it is hardly possible to influence it for those who experience its consequences as they get displaced to the unorganized sector. That is, unless workers are prevented from losing their jobs there's not much that can be done for them by the union after they are no longer union members.

The author concludes that labor has merely stood its ground, protected the status quo of workers rights against the consequences of technological innovation. In his sample study, in recent years, roughly during the years 1956-1962, there was a period of adaptive change in collective bargaining with mostly defensive measures to safeguard union achievement against roll-back by management policies and technological change, otherwise, job control has stagnated. Attempts to secure job careers and protection via wide and effective seniority, or to resolve the standards problems for long terms, have failed largely because the Internationals are more concerned with wages, fringe benefits and stabilization of earnings.

72:7.00

TITLE: "Government Approaches to the Humanization of Work"
AUTHOR: Neal Q. Herrick
PUBLISHER: In Industrial Relations Research Association, Proceedings of the Twenty-Fifth Anniversary Meeting, December 28-29, 1972, pp. 160-165.
KEY WORDS: Adjustments; Macro, Government, Working Conditions, Job Satisfaction; Public Policy (Public Representation in Bargaining, Legislation, Planning); Descriptive (Ongoing Trends); Footnotes (None), Bibliography (None); No Abstract.

72:8.00

TITLE: "Prefabricated Construction Development Abroad"
AUTHOR; E. J. Howenstine
PUBLISHER: Monthly Labor Review, Vol. 95, No. 5, May 1972, pp. 27-36.
KEY WORDS: Adjustments; Micro, Eastern Europe, Western Europe, Prefabricated Housing, Skill Requirements, Industrial Structure, Wage Effects, Working Conditions, Unemployment; Private Policy (Retraining), Public Policy (Income Maintenance, Full Employment, Relocation); Descriptive (Past Trends, Ongoing Trends, Projected Trends); Footnotes (Moderate), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A micro economic approach. Methodology — Descriptive analysis of past, ongoing, and projected trends. Major Conclusions — As a consequence of rationalization in the European housing industry it was found that more specialization is required of specialist occupations and less command of traditional craft skills. Prefabrication has created another new occupation, the assembler. Prefabrication did not cause shifts in maintenance and repair worker skills. So, while the skill composition of the labor force was changing it is doubtful this would lead to a reduction in the overall skill level of the industry.

The biggest change in industrial structure has come from the transferring of functions from the work site to the factory. A major problem of coordinating efforts has developed. A flow-line method of organizing on the building site has been adopted for efficiency. This team character of industrialized building has had significant implications for wage payment systems. Productivity has increased substantially throughout Europe. This has reduced on-site man-hours and cost of construction. This will further the rationalization of traditional building methods.

Changes in working conditions have resulted. Factory work has led to more regular working hours, better sanitation and welfare facilities, improved safety provisions, although factory work has created many occupational hazards that previously did not exist.

Traditional apprenticeship methods were found incapable of coping with all the demands of technology. More training facilities were recommended.

It was also found that technological unemployment could increase as a result of rationalization in the housing industry. Public policy of full employment, long-term housing construction plans, supplementary benefits and income maintenance were suggested.

72:9.00

TITLE: "Efficiency Growth in New Zealand Agriculture: A Review"
AUTHOR: R. W. M. Johnson
PUBLISHER: Economic Record, Vol. 48, No. 121, March 1972, pp. 76-91.
KEY WORDS: Adjustments; Historical, Micro, New Zealand, Agriculture, Employment, Capital-Labor Ratio; Review of the Literature, Theoretical Model, Empirical (Regression, Tables), Descriptive (Past Trends); Footnotes (Moderate), Bibliography (None); No Abstract.

72:10.00

TITLE: "The Future of Work: Three Possible Alternatives"
AUTHOR: Denis F. Johnston
PUBLISHER: Monthly Labor Review, Vol. 95, No. 5, May 1972, pp. 2-9.
KEY WORDS: Adjustments; Historical, Macro, Males, Women, Blue Collar-White Collar, Employment, Unemployment, Private-Public Relations, Hours of Work, Earnings, Job Satisfaction, Education Requirements; Private Policy (Retraining, Planning), Public Policy (Full Employment, Fiscal Policy, Income Policy, PEP, Manpower Programs, Relocation, Retirement, Day Care, Planning, Population Control); Review of the Literature, Descriptive (Ongoing Trends, Projected Trends, Futurists Views); Footnotes (Moderate), Bibliography (None); No Abstract.

72:11.00

TITLE: "Biased Technological Progress and Labor Force Growth in a Dualistic Economy"
AUTHOR: Allen C. Kelley, Jeffery G. Williamson, and Russell J. Cheetham
PUBLISHER: Quarterly Journal of Economics, Vol. 86, No. 3, August 1972, p. 426.
KEY WORDS: Adjustments; General Equilibrium, Macro, Asia, Agriculture, Economic Growth, Unemployment; Theoretical Model, Empirical (Sensitivity Analysis, Regression, Tables, Projected Trends); Footnotes (Moderate), Bibliography (None); No Abstract.

72:11.50

TITLE: "Men Without Property"
AUTHOR: Louis Kelso and Patricia Hetter
PUBLISHER: Business and Society Review, Summer 1972, pp. 14-19.
KEY WORDS: Adjustments; Macro, Labor-Management, Wage Effects; Public Policy (Full Employment, Income Redistribution); Theoretical Discussion; Abstract.

ABSTRACT: Scope and Level — A brief theoretical discussion of the two-factor theory which begins by recognizing capital as an independent factor of production.

Major Conclusions — Many of our economic difficulties seem to have their root in lack of purchasing power. But higher wages of itself will only result in higher prices. Unless a worker uses his labor to produce a marketable product or service, his wages will be inflationary. If income rises, production of consumer goods and services must expand commensurately.

The source of affluence is capital instrument. Therefore, a goal of full employment is not the answer to the problem of distribution of wealth. To make society richer, a vastly larger economy is necessary. The new capital goods which make up that expansion must be financed so that they become owned by the 95% of American families who are totally dependent on labor.

The two factor theory suggests a new corporate strategy that enables management to build market power as it builds new productive power. It suggests an enlarged role for the labor union and a new economic goal for national policy.

72:12.00

TITLE: Arbitration of Technological Change
AUTHOR: Geoffrey R. King
PUBLISHER: Ph.D. Dissertation, University of Southern California, 1972.
KEY WORDS: Adjustments; Historical, Micro, Unions, Labor-Management, Case Studies, Collective Bargaining, Union-Management Powers, Work Rules, Fringe Benefits, Wage Effects; Private Policy (Seniority, Severance Pay, Paygrades, Job Security, Working Conditions, Skill Requirements), Public Policy (Mediator); Empirical (Tables, Cases); Footnotes (Moderate), Bibliography (Moderate); Abstract.
ABSTRACT: Scope and Level — An investigation of the union contention in the arbitration of technological changes and the results of those contentions. Methodology — A study of published cases of arbitration which occurred between the years 1960 to 1970 to determine the impace of technological change. Major Conclusions — Unions were awarded only 22 percent of the cases studied. The author concludes that unions were quite aggressive in their attempts to turn the tide of technological change; that unions were not dismayed by their relatively few successes; and, that they rarely violated the no-strike clause. Unions are now in a defensive position as a result of technological change. In some cases, automation has removed work formerly performed by bargaining unit members.

Management rights vs. union rights were a significant part of this study. Management is turning to technological change as a means to remain competitive. Decreasing wages is no longer possible. Because of technological change, employers are looking for workers with higher skills and seniority provisions are less significant than in the past.

Certain trends in the views of arbitrators were apparent in this study. Non-skilled jobs have given way to semi-skilled jobs, as a result of technological change, and while arbitrators were firm on the retention of present employees according to contract provisions, they advised against hiring unskilled workers in the future. Arbitrators held that severance pay should only be given if workers wanted completely out of the plant. Criteria for wage increases following technological change, in the arbitrators' view, was increased effort and increased hazard rather than increased productivity.

72:13.00

TITLE: "The Impact of Technology"
AUTHOR: Louis B. Knecht
PUBLISHER: American Federationist, Vol. 79, No. 7, July 1972, pp. 17-19.
KEY WORDS: Adjustments; Macro, Alienation of Workers, Collective Bargaining; Private Policy (Job Content, Job Satisfaction, Labor-Management Cooperation, S.U.B.); Theoretical Discussion, Descriptive (Ongoing Trends, Future Trends); Footnotes (None), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A general discussion of the impact of automated jobs on worker physical and psychological satisfaction. Methodology — Basically a theoretical analysis (bolstered by quotes from famous authorities in the field) of how the worker is affected by the changing role he plays in the industrial process. Major Conclusion — The main conclusion of this article is that we should not accept automation without reservations. Unless properly handled, the impact of technology may cause unnecessary harm to the human condition. Careful, humanistic considerations must be given to the worker as he is confronted with an entirely different work process.

Policy recommendations include:

(1) letting the worker share in the decision-making process
(2) promoting truly cooperative efforts by union and management
(3) concentrating on improving the job content and consequent satisfaction from various jobs.

72:14.00

TITLE: "Technological Progress and Its Effects on Soviet Dockworkers"
AUTHOR: E. Korsakov
PUBLISHER: International Labour Review, Vol. 105, No. 6, June 1972, pp. 531-543.
KEY WORDS: Adjustments; Micro, Longshoremen, U.S.S.R., Machine Operators, Unskilled, Skilled, Wage Effects; Public Policy (Education, Manpower Programs); Descriptive (Ongoing Trends), Empirical; Footnotes (None), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — An investigation into the changing role of workers and the increase in production due to the introduction of the latest technological equipment in the Soviet sea ports. Methodology — Empirical in nature, this study discusses the rationale for the introduction of new technology on the Soviet docks and then presents various statistics to document the increase in productivity and cargo handling attributable to this new equipment. Major Conclusions — The major conclusion drawn is that although the introduction of new machinery presented some problems for the relatively unskilled cargo handlers, the systematic upgrading of pay scales, education and training for the heretofore unskilled work force resulted in a smooth transition from antiquated to modern methods of handling cargo.

As a result of the favorable outcome of this experiment, the Soviet's are proceeding to apply the knowledge gained from the sea ports in river, fishing, and timber ports, at a number of railway yards, and at the transshipment centers of the Ministry of Foreign Trade.

72:15.00

TITLE: "Automation"
AUTHOR: Julius Rezler
PUBLISHER: In Joseph J. Famularo, ed., Handbook of Modern Personnel Administration, New York, McGraw Hill, 1972, pp. 63-1 - 63-14.
KEY WORDS: Adjustments; Micro, Personnel Administration, White Collar, Unemployment, Collective Bargaining, Union-Management Powers, Blue Collar-White Collar, Unions, Work Relationships, Job Content; Private Policy (Relocation, Retraining, Severance Pay, Layoff Notification, Attrition, Early Retirement, Planning, Advance Notification); Theoretical Discussion; Footnotes (Few), Bibliography (Moderate); Abstract.
ABSTRACT: Scope and Level — A discussion of the effects of automation on personnel administrators. Methodology — Possible effects of automation and solutions to problems which may arise are discussed to assist personnel managers in dealing with problems in automated situations. Major Conclusions — The personnel manager has a major role to play in helping workers adjust to automation. Advance notice of impending change and continuing communication to reduce apprehension is within the scope of the personnel function. As automation affects the composition of the work force and job content the personnel department must anticipate manpower needs and plan for the transfer and/or retraining of current employees or for the possible unemployment which may result from the change.

Automation will upgrade the functions of personnel managers and will require them to update their training and education.

72:16.00

TITLE: "Now is the Time for Productivity Bargaining"
AUTHOR: Jerome M. Rosow
PUBLISHER: Harvard Business Review, Vol.50, No.1, January-February 1972, pp.78-89.
KEY WORDS: Adjustments; Micro, Great Britain, Case Study, Unions, Management Practices, Collective Bargaining; Private Policy (Work Rules); Descriptive (Past Trends); Footnotes (Few), Bibliography (None); No Abstract.

72:17.00

TITLE: "Development Costs: Determinants and Overruns"
AUTHOR: J. E. Schnee
PUBLISHER: Journal of Business, Vol.45, No.3, July 1972, pp.347-374.
KEY WORDS: Adjustments; Micro, Pharmaceutical Industry; Empirical (Regression, Sample); Footnotes (Moderate), Bibliography (None); No Abstract.

TITLE: "Some Selected Issues Surrounding the Subject of the Quality of Working Life"
AUTHOR: Harold L. Sheppard
PUBLISHER: Industrial Relations Research Association, Proceedings of the Twenty-Fifth Anniversary Meeting, December 28-29, 1972, pp. 137-153.
KEY WORDS: Adjustments; Micro, Unions, Management Practices, Working Conditions, Sweden, Collective Bargaining, Job Content, Job Satisfaction; Private Policy (Planning, Shorter Work Week, Job Content, Flexible Work Scheduling, Working Conditions); Empirical (Tables, Cases); Footnotes (Many), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A study of job satisfaction and ways to improve it. Methodology — The author directs himself to six issues surrounding the quality of working life including, is it a false issue, who's more alienated (blue collar or white collar workers), are there any solutions, the validity of job satisfaction surveys, the role of the job tasks themselves, and is there a new anti-union movement. Major Conclusions — Job dissatisfaction is a reality and blue collar workers are less satisfied than workers as a whole. Volvo, a swedish car manufacturer is sighted as a company which is innovatively approaching problems of worker alienation by adapting the work environment. Surveys which show worker dissatisfaction are valid; this is reflected in the large turnover in many plants. Studies cited show that the more rigid the work schedule and routine the job the more workers look forward to retirement. Early retirement was taken by 29% of the eligibles non-skilled workers at Ford in 1971 compared with 17% of the skilled workers.

Unions are not meeting the needs of workers as far as improving working conditions is concerned. The less the variety, responsibility, and autonomy in their jobs the more the workers were dissatisfied with their unions. Unions must take a more active role in this area.

72:19.00

TITLE: "Boycotts of Prefabricated Building Products and the Regulation of Technological Change on the Construction Jobsites"

AUTHOR: A. B. Smith

PUBLISHER: Industrial and Labor Relations Review, Vol. 25, No. 2, January 1972, pp. 186-199.

KEY WORDS: Adjustments; Historical, Prefabricated Housing, Unions, Construction Industry, Government; Private Policy (Collective Bargaining), Public Policy (Legislation); Review of the Literature, Descriptive (Past Trends, Ongoing Trends); Footnotes (Moderate), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A historical analysis of the prefabricated housing industry. Methodology — The article reviews the many court cases surrounding product boycotts and is descriptive of the legislative relationships that have developed around the conflicting parties. Major Conclusion — The effect of Section 8 (b) (4) (B) of the Labor-Management Relations Act on the legality of the typical boycott of prefabricated products on a construction jobsite effected by means of union pressure on a contractor with the objective of forcing project developers to change architectural specifications and thereby ban prefabricated products from the jobsite is uncertain. One solution may be collective bargaining in resolving the problems of technological change, and the problem of policy behind section 8 (b) (4) (B) of the Act of protecting employers in the position of neutrals between contending parties. This could be accomplished by prohibiting only those product boycotts not sanctioned by valid work-preservation clauses in collective bargaining agreements and which seek to coerce contractors into forcing developers to change architectural specifications and to prohibit the installation of prefabricated products.

72:20.00

TITLE: "Process Design, Automation and Worker Alienation"
AUTHOR: G. I. Susman
PUBLISHER: Industrial Relations, Vol. 11, No. 1, February 1972, pp. 34-45.
KEY WORDS: Adjustments; Micro, Pennsylvania, Skilled, Alienation of Workers; Empirical (Tables, Correlation, Sample); Footnotes (Many), Bibliography (None); Abstract.
ABSTRACT: Scope and Level — A micro economic approach. Methodology — An empirical analysis of data gathered in a questionnaire sent to 200 companies from the 12 industries each employing 50 or more persons. The 200 companies were listed in the Pennsylvania Industrial Directory. Major Conclusion — Increased automation (rationalization) causes increased levels of worker alienation as defined in the study.

72:21.00

TITLE: "New Technology in Laundry and Cleaning Services"
AUTHOR: Mary L. Vickery
PUBLISHER: Monthly Labor Review, Vol. 95, No. 2, February 1972, pp. 54-59.
KEY WORDS: Adjustments; Micro, Laundry Industry, Case Study, Skill Requirements; Private Policy (Retraining); Descriptive (Ongoing Trends, Future Trends); Footnotes (Moderate), Bibliography (None); Abstract.
ABSTRACT: Scope and Level — A case study of the laundry and cleaning services, with projections of future industry trends. Methodology — This study utilizes industry statistics to document the amount and distribution of workers in the industry. Also discussed are the impetus, diffusion, and impact of new technology. Major Conclusion — The main conclusion is that the growth and diversification of the industry will more than offset employment losses resulting from technological innovation, however, some workers may lack the required skills to make a smooth transition from declining to growing sectors of the industry.

To help make the movement between sectors easier, the author recommends that labor unions and management implement training programs. Also mentioned is the fact that many companies have already begun programs to give supplemental instruction to indirect labor, i.e., foremen, maintenance men, and administrators, who will play a growing role in the industry.

72:22.00

TITLE: "Job Enrichment - Another Part of the Forest"
AUTHOR: William W. Winpisinger
PUBLISHER: Industrial Relations Research Association, Proceedings of the Twenty-Fifth Anniversary Meeting, December 28-29, 1972, pp. 154-159.
KEY WORDS: Adjustments; Micro, Unions, Management Practices, Blue Collar, Job Content, Collective Bargaining, Hours of Work, Fringe Benefits, Job Satisfaction; Private Policy (Seniority, Relocation, Retraining, Shorter Work Week, Pay Incentives, Working Conditions, Skill Requirements); Theoretical Discussion; Footnotes (None), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A discussion of "Blue Collar Blues" and what can be done about it. Methodology — A discussion of job dissatisfaction among blue collar workers and the effectiveness of various methods of job enrichment. Major Conclusions — The best form of job enrichment is increased wages. A shorter work week would increase job satisfaction as would improving working conditions by decreasing noise levels, heat and fumes. Blue collar job dissatisfaction also relates to snobbery surrounding coveralls as opposed to white collars. Workers must have a voice in the determination of their working conditions and jobs and have a reasonable hope for advancement in order to be satisfied with their work.

Job satisfaction increases with age and unions must continue to work for job enrichment. If this is done, younger workers, who appear to be most dissatisfied, will reap the benefits and become happier in their work.

71:0.50

TITLE: Structural Wage Issues in Collective Bargaining
AUTHOR: Clifford M. Baumback
PUBLISHER: Lexington, Massachusetts, Heath-Lexington Books, 1971.
KEY WORDS: Adjustments; Micro, Management Practices, Unions, Cases, Collective Bargaining, Wage Effects; Private Policy (Job Content, Pay Incentives); Descriptive (Ongoing Trends, Cases); Abstract.

ABSTRACT: Scope and Level — A study concerned with internal wage structures encountered in collective bargaining and arbitration. Discussion focused on wage differences between jobs and between workers on the same job, the relationship between wages and work standards, and methods of determining work standards and productivity wage premiums. Methodology — Examines 277 arbitration awards, discusses bargaining rights and illustrates contract interpretation problems resolved by arbitrators. Discussion of wage structure problems is divided into three parts: 1) merit increases within a rate range, or by promotion to a higher classification; 2) work assignments and the establishment of job classifications and rates; 3) the administration of work standards and incentive methods of wage payment.

Major Conclusions — The attitudes and policies of workers and unions towards principles and applications of wage incentives shows a changing pattern over the years. There is evidence of a long-run favorable trend on the part of labor to accept wage incentives. Trade union criticism has shifted from the wage incentive principle to the real or alleged abuses of management in the application of the principle.

71:1.00

TITLE: "Notes on the Post-Industrial Society"
AUTHOR: Daniel Bell
PUBLISHER: in Jack D. Douglas, ed., The Technological Threat, Englewood Cliffs, N. J., Prentice-Hall, 1971, pp.8-20.
KEY WORDS: Adjustments; Macro, Government, Post-Industrial Society, Blue Collar-White Collar, Private-Public Relations; Public Policy (Monetary Policy, Fiscal Policy, Legislation, Manpower Programs, Planning, Education); Descriptive (Ongoing Trends, Futurists Views); Footnotes (Few); Bibliography (None); No Abstract.

71:1.50

TITLE: "Psychological Adaption in a World of Programmed Machines"
AUTHOR: Robert Cancro
PUBLISHER: Annals of the New York Academy of Sciences, Vol. 184, June 7, 1971, pp. 230-238.
KEY WORDS: Adjustments; Macro, Sociological and Psychological Effects; Theoretical Discussion; Footnotes (None), Bibliography (Small); Abstract.
ABSTRACT: Scope and Level — A theoretical treatment of the deep psychological ramifications of automation among men who derive their social value system from working. Major Conclusion — The author sees an increase in aggressive behavior as a result of a less strenuous environment that has previously allowed humans to vent their aggressiveness during the work process.

71:2.00

TITLE: "Accelerating Obsolescence of Older Engineers"
AUTHOR: Gene W. Dalton and Paul H. Thompson
PUBLISHER: Harvard Business Review, Vol. 49, No. 5, September–October 1971, pp. 57–67.
KEY WORDS: Adjustments; Macro, Older Workers, Engineers, Skill Requirements; Private Policy (Retraining, Vacations, Job Assignments, Transfer Options, Pension Rights, Counseling); Descriptive (Ongoing Trends, Cases); Footnotes (Few), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A macro discussion based upon six technology-based companies presenting increased engineer-management obsolescence but, with implications for coping with obsolescence. Methodology — A descriptive presentation of private sector responses to recognizing and dealing with the lowering age of individual obsolescence. This is based upon the rate of technological changes, psychological changes, rigid evaluation systems and lacking mobility. Major Conclusions — The technically based organizations that hope to remain competitive must act now to close the gap between age and performance. To remedy this the private sector must not just retrain using traditional refresher courses and continued education, which may place an excessive burden on the trainee; but, experiment with in-plant transmital medias. Closed-circuit T.V., videotaping and two-way picture phones provide an hour taken off work with a full hour of training. Where part-time efforts are questionable the author strongly builds a case for sabbaticals every 5 or 10 years.

To avoid unnecessary productivity loss from older workers managers must increase coordinations between available skill levels and job assignments. Existing employee skills may be more productive if they could be allowed to move to another organization without loss of pension. This necessary mobility must be provided. The authors present the portable pension plan.

The authors maintain this movement toward younger and younger obsolescence is a large part induced by the companies rigid performance appraisal systems, inequitable job assignments, lack of counseling and insensitivity to the needs of older engineers. No final solutions are offered but a few approaches used in the 2,500 design and development engineers case study are offered.

71:2.40

TITLE: "The Coming Crisis for Production Management: Technology and Organization"

AUTHOR: L. E. Davis

PUBLISHER: International Journal of Production Research, Vol. 9, No. 1, 1971, pp. 65-82.

KEY WORDS: Adjustments; Micro, Management Practices, Case Studies, Norway, Great Britain, U. S., Job Satisfaction, Work Relationships, Job Content; Private Policy (Job Content); Theoretical Discussion, Empirical (Cases); Abstract.

ABSTRACT: Scope and Level — A discussion of ways in which organizational structure can adapt from the industrial to the post-industrial era. Methodology — Several examples and case studies are cited to support and illustrate the socio-technical approach to organizational design. Major Conclusions — Western society is well embarked on the transition from the industrial to the post-industrial era. The structures of the industrial organization, in particular, are growing increasingly dysfunctional because they stand at the confluence of changes involving technology, social values, the economic environment, organizational design, job design and the practices of management. Unless their managers can adapt, these industries will be the first to be hit by crisis and massive dislocation. However, theoretical and practical studies in "socio-technical systems", under way in England, Norway and the United States during the last 20 years, suggest ways in which production organizations can fit themselves to the new characteristics inherent in the post-industrial field. In such a modified environment, jobs will be characterized by greater autonomy adaptability, variety and participation. In return, workers will offer a higher degree of commitment to the job and the organization.

71:2.50

TITLE: "Job Satisfaction Research: The Post-Industrial View"
AUTHOR: L. E. Davis
PUBLISHER: Industrial Relations, Vol.10, No.2, May 1971, pp.176-193.
KEY WORDS: Adjustments; Micro, Historical, Job Satisfaction, Post-Industrial Society, Management Practices; Review of the Literature; Footnotes (Moderate), Bibliography (None); No Abstract.

71:3.00

TITLE: The Social Partners Face the Problems of Productivity and Employment

AUTHOR: Yves Delamotte

PUBLISHER: Paris, Organization for Economic Cooperation and Development, 1971.

KEY WORDS: Adjustments; Macro, Micro, Work Rules, Great Britain, Sweden, Germany, France, Unions, Management Practices, Government, Employment, Unemployment, Collective Bargaining, Union-Management Powers, Job Content, Labor Mobility; Private Policy (Relocation, Retraining, Severance Pay, G.A.W., Attrition, Shorter Work Week, Pay Incentives), Public Policy (Income Policy); Empirical (Tables, Cases); Footnotes (Moderate), Bibliography (None); No Abstract.

71:3.10

TITLE: Proceedings of Conference on Maximizing Productivity Improvement of Hourly Workers
AUTHOR: John L. Fulmer, ed.
PUBLISHER: Atlanta, Georgia, Industrial Management Centers, Georgia Institute of Technology, 1971.
KEY WORDS: Adjustments; Alienation of Workers, Earnings, Discrimination, Sociological and Psychological Effects, Private Policy (Counseling), Public Policy (Education, Counseling, Day Care); Descriptive (Ongoing Trends, Future Trends); Abstract.

ABSTRACT: Scope and Level — Contains a detailed account of a conference on the conditions affecting worker productivity with attention focused on how to motivate workers, develop them into more capable persons, gain their loyalty to the employer, and help them solve their personal problems.

Major Conclusions — The concensus from the conference is that the productive worker is kept informed, helps set company goals and achieve them, feels that he is important to company success and shares in its profits, is in good physical and mental health, is developed continuously as a person, and has access to company counseling, and, if necessary referral to solve personal, medical, legal, and financial problems. The worker, in effect, receives first priority in management's planning and company operations and, reciprocating, the worker gives first consideration in his thinking to the company and its needs. The methods by which to generate this interdependence in the relationships between management and employees include: 1) worker involvement in company goals by orienting the individual to the goals of business; 2) special and remedial education for workers with poor communication skills; 3) problems solving for workers provided either directly or by outside agencies to help the worker remove his troubles, reduce distractions and make him a more efficient worker; 4) assistance provided by community agencies (e.g. child care and child counseling and legal aid); and, 5) integrated programs for worker development to help eliminate discrimination on the basis of sex, age and race.

71:3.25

TITLE: "Computer Utilization in OECD Countries"
AUTHOR: H. P. Gassman
PUBLISHER: OECD Observer, No. 54, October 1971, pp. 32-35.
KEY WORDS: Adjustments; Micro, Europe, Computer Industry, Computer Programmers, Professional Workers, Employment; Private Policy (Retraining), Public Policy (Manpower Programs); Descriptive (Ongoing Trends); Footnotes (None), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A brief discussion of the need for the European nations to create data banks and of the extreme demand for qualified programmers. Major Conclusion — The main finding of this study is that both the private and public sector should begin an immediate program to train a qualified core of computer programmers. Also, stricter regulations of existing training schools is necessary to overcome the somewhat tarnished reputation of many of the existing computer schools.

71:3.50

TITLE: "Modernization in the Maritime Industry"
AUTHOR: Joseph P. Goldberg
PUBLISHER: Part III in Collective Bargaining and Technological Change in American Transportation, Evanston, Illinois, The Transportation Center at Northwestern University, 1971.

KEY WORDS: Adjustments; Historical, Maritime Industry, Management Practices, Government, Unions, Collective Bargaining, Union-Management Powers; Private Policy (Labor-Management Cooperation, Seniority, Job Security, Early Retirement, Attrition, Retraining, S.U.B., G.A.W., Work Rules, Collective Bargaining), Public Policy (Public Representation in Bargaining); Descriptive (Past Trends, Ongoing Trends, Future Trends), Empirical (Tables); Footnotes (Moderate), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A historical discussion of trends in the maritime industry with an emphasis on recent trends. Methodology — A descriptive analysis of past, current and projected trends emphasizing labor, management, and government adjustments to technological change. Major Conclusions — The maritime industry has been subject to evolving and intensified change in cargo-handling and ship operations technology over the past decade. In longshoring, earlier developments were limited and were handled as supplemental to traditional break-bulk operations; with the recent surge in transoceanic containerization, the integrated systems-orientated transmodal operations threaten substantial displacement of break-bulk operations.

Initial east and west coast approaches were primarily affected by local tradition and experience; but as container operations mold dockside operations into a limited assembly-line operation parallel efforts to ensure work opportunities may develop.

Joint labor-management administration of labor force requirements and seniority upgrading have been a major underpinning for joint approaches to broad maritime industry problems. Approaches have varied on the two coasts but all have had the effect of assuring regularity of employment and earnings to regular longshoremen and seamen. These arrangements have been crucial to job security adjustments to modernization.

The regular labor forces have been kept in balance by upgrading to the senior regular positions only as needed to maintain a substantially stabilized level in these, by new but limited entries to less senior categories, and by use of casual workers as a last resort. On the west coast, employment needs for longshoresmen are now determined by a joint coastwide committee. Training programs are widely used to meet requirements for skills necessary to handle the new equipment. Plans for job security have been developed.

The reality of accepting technological change and negotiated adjustments to meet those changes is now a major attribute in U.S. shipping industry labor-management relations.

71:4.00

TITLE: Decasualization and Modernization of Dock Work in London
AUTHOR: Vernon H. Jensen
PUBLISHER: Ithaca, New York, New York State School of Industrial and Labor Relations, Cornell University, 1971.
KEY WORDS: Adjustments; Micro, Case Study, Longshoremen, Great Britain, Unions, Labor-Management, Government, Collective Bargaining, Labor Mobility, Work Rules, Wage Effects; Private Policy (G.A.W., Pension Rights, Job Security, Work Sharing, Shorter Work Week), Public Policy (Nationalization); Empirical (Case); Footnotes (Few), Bibliography (None); No Abstract.

71:4.25

TITLE: "Collective Bargaining on the Airline Flight Deck"
AUTHOR: Mark L. Kahn
PUBLISHER: Part IV in Collective Bargaining and Technological Change in American Transportation, Evanston, Illinois, The Transportation Center at Northwestern University, 1971.

KEY WORDS: Adjustments; Historical, Airline Industry, Management Practices, Government, Unions, Collective Bargaining, Wage Effects, Union-Management Powers; Private Policy (Job Content, Layoff Notification, Pay Incentives, S.U.B., Seniority, Work Rules, Collective Bargaining); Theoretical Discussion, Descriptive (Past Trends, Ongoing Trends, Future Trends), Empirical (Tables); Footnotes (Few), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A historical discussion of recent trends in the airline industry. Methodology — A discussion of past, current and projected trends in the airline industry emphasizing adjustments to technological change by management, labor and government. Major Conclusions — Technological change in the airline industry has been rapid. This has caused substantial gains in productivity resulting in continuing improvement in compensation. Collective bargaining has resulted in rational adjustment to technological change in terms of compensation policy with pilots making substantial gains in pay and continued long-run prosperity for airline owners. As airline technology continues to expand pilot pay should improve while pilot pay formulas change. Technological trends point toward all-pilot flight decks which should improve the position of the pilot organization.

Non-pilots on the flight deck should continue to be replaced. Collective bargaining has dealt well with this and other issues and should be continually utilized.

71:4.50

TITLE: "Technological Change and Educational Obsolescence: Challenges to Administrators as Managers of Change"
AUTHOR: Richard H. P. Kraft
PUBLISHER: International Review of Education, Vol.17, No.3, 1971, pp.309-323.
KEY WORDS: Adjustments; General Equilibrium, Macro, Educators, White Collar, Skilled Workers; Public Policy (Vocational Education); Theoretical Discussion, Empirical; Footnotes (Few), Bibliography (Small); No Abstract.

71:4.60

TITLE: "The Maintenance Training Gap"
AUTHOR: John W. Lee and John W. Lancaster
PUBLISHER: Training and Development Journal, Vol. 25, No. 11, November 1971, pp. 46-49.
KEY WORDS: Adjustments; Micro, Maintenance Workers, Blue Collar-White Collar, Employment, Skill Requirements, Work Relationships; Private Policy (Retraining); Theoretical Discussion, Descriptive (Ongoing Trends); Footnotes (None), Bibliography (Small); Abstract.
ABSTRACT: Scope and Level — A general discussion of the changing demand for and role of the maintenance worker. Methodology — A descriptive analysis of what the authors feel will be the future skill levels needed for a new type of maintenance worker. Major Conclusion — The main conclusion is that, due to the transformation of the blue collared maintenance worker to a white collared technician, industry must begin now to train a new breed of men. Likewise, because it is predicted that new entrants into the area will have at least three separate occupations during their lifetime, the training he receives should evolve around the concept of creating a program that gives the worker a well-rounded rather than a narrow background.

Major recommendations include additional research on maintenance training and the maintenance function, and additional empirical research in the area of maintenance training effectiveness, methods, and problems.

71:4.70

TITLE: "Collective Bargaining and Technological Change in American Transportation: An Integrative Analysis"
AUTHOR: Harold M. Levinson
PUBLISHER: Part V in Collective Bargaining and Technological Change in American Transportation, Evanston, Illinois, The Transportation Center at Northwestern University, 1971.
KEY WORDS: Adjustments; Historical, Transportation Industries, Unions, Government, Management Practices, Collective Bargaining, Union-Management Powers; Private Policy (Labor-Management Cooperation, Multicraft Unions, Union Jurisdiction), Public Policy (Legislation, Public Representation in Bargaining); Descriptive (Past Trends, Ongoing Trends, Future Trends); Footnotes (Few), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A historical discussion of recent trends in the transportation industry. Methodology — A discussion of past, ongoing, and projected trends in the transportation industry emphasizing adjustment and public policy toward adjustment. Major Conclusions — Collective bargaining has achieved a reasonably high degree of success in dealing with the problems of labor displacement and manpower adjustment presented by the technological developments of the past three decades. Within this broadly favorable trend there have been considerable variations among the various union and employer groups in the relative ease or difficulty which they have had in achieving an acceptable accomodation to change. These differences can be explained by three underlying explanatory variables: the economic environment; the nature of the union's membership base and internal structure; and the scope of the bargaining unit.

Policy recommendations made on the basis of each respective variable include the changing of regulatory policy to permit more aggressive price competition through the adoption of more flexible rate making regulatory standards, and facilitating the processing of petitions for regulatory approval of mergers and other types of inter-carrier coordination. Secondly, labor legislation should be consolidated so that it is applicable to all four major transport sectors. Also, more broadly based bargaining units should be encouraged and public policy in this area limited. Finally, the scope and applicability of unfair labor practices provisions should be standardized to improve the knowledge of all parties involved with respect to their flexibility in a bargaining situation. With this move, voluntary grievance procedures should be encouraged.

Dispute procedures should be changed to reflect the changed conditions surrounding bargaining today.

71:4.75

TITLE: "Collective Bargaining and Technological Change in the Trucking Industry"

AUTHOR: Harold M. Levinson

PUBLISHER: Part I in Collective Bargaining and Technological Change in American Transportation, Evanston, Illinois, The Transportation Center at Northwestern University, 1971.

KEY WORDS: Adjustments; Historical, Trucking Industry, Unions, Labor-Management, Government, Union-Management Powers, Collective Bargaining; Private Policy (Layoff Notification, Severance Pay, Pay Incentives, S.U.B., Seniority), Public Policy (Public Representation in Bargaining); Descriptive (Past Trends, Ongoing Trends, Future Trends), Empirical (Tables); Footnotes (Few), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A historical discussion of recent trends in the regulated trucking industry. Methodology — A descriptive analysis of past, present and future trends of the trucking industry, the industrial relations environment, and adjustments made by union and management to technological change. Major Conclusion — The expanding employment opportunities in the industry, the high degree of elasticity of demand for trucking services, and the mileage-load carrying capacity formula of driver payment combined to provide a set of economic factors which were extremely favorable to the introduction of technological change.

The internal structure of the teamsters union was found highly favorable to the broad acceptance of technological change. National officers have been willing to accept change even though displacement and local dissidence has been a factor. This position is supported by the ability of national officers to make such decisions due to the centralized structure of decision making in the union.

The author argues that the current structure of bargaining (national bargaining) is best suited for the industry and its absorption of technological change. Also, public policy vis-a-vis the regulatory aspect of the industry should foster competition among the several transportation sectors.

These and other factors should continue the favorable environment for the acceptance of technological change in the inter-city trucking industry.

71:4.90

TITLE: Trade Unions and Technological Change
AUTHOR: J. E. Mortimer
PUBLISHER: London, Oxford University Press, 1971.
KEY WORDS: Adjustments; Macro, Great Britain, Unions, Private-Public Relations, Blue Collar-White Collar; Private Policy (Retraining, Overtime, Apprenticeship, Work Rules, White Collar Unionization), Public Policy (Full Employment, Education, Manpower Programs, Foreign Trade Policy); Theoretical Discussion, Descriptive (Ongoing Trends); Footnotes (None), Bibliography (Small); Abstract.

ABSTRACT: Scope and Level — A general overview of the role, strength and history of trade unions in England with special attention given to the effects of technological change. Methodology — Although much empirical evidence is presented to emphasize the historical stance taken by the unions when faced with innovations, the author also engages in a theoretical discussion as to what the future holds for the unions. Major Conclusions — While the author rather half-heartedly agrees with the contention that the restrictive practices of the trade unions have been partially responsible for the lack of luster in the English rate of growth, he feels that the union leadership is adopting more productive and modernistic approaches to the problem, and the future forebodes more union-management cooperation if the economy is expanding and there is full employment.

This book could also serve as an excellent primer on the past and present situation of the British trade unions and their responses to technological change. Some of the major recommendations advanced along these lines are that there will be an increase in white-collar membership, the problems of inflation are at the center of the government's stop-go economic policy, and the balance-of-payments deficits of recent years have awakened labor to be more reasonable in its demands for wage increases. Major recommendations made are for a private and public effort to enhance the training available, both to adults and juveniles, so that the transition to a more technologically advanced society can be accomplished with the least possible human suffering.

71:5.00

TITLE: The Role of the Private Sector in Manpower Development
AUTHOR: Charles A. Myers
PUBLISHER: Baltimore and London, The John Hopkins Press, 1971.
KEY WORDS: Adjustments; Macro, Disadvantaged Workers, Unskilled Workers, Blacks, Younger Workers, Private-Public Relations; Private Policy (Apprenticeship, Retraining), Public Policy (Education, Manpower Programs); Descriptive (Ongoing Trends); Footnotes (Few), Bibliography (Large); No Abstract.

71:6.00

TITLE: "The Impact of Technology on Ethical Decision-Making"
AUTHOR: Robert Nisbet
PUBLISHER: In Jack D. Douglas, ed., The Technological Threat, Englewood Cliffs, N.J., Prentice Hall, 1971, pp. 39-54.
KEY WORDS: Adjustments; Historical, Sociological and Psychological Effects; Public Policy (Planning); Descriptive (Past Trends, Futurist Views); Footnotes (Moderate), Bibliography (None); Abstract.
ABSTRACT: Scope and Level — A discussion of the impact of technology on moral values and ethical decision making. Methodology — The place of technology in contemporary life is discussed along with an historical perspective on social conflict and resulting social change. Major Conclusions — Technology per se as a machine is powerless to affect human culture or ethics. Only as it becomes institutionalized does it become a moulding force in society. Technology, as it is institutionalized may be regarded as a threat to individuality and concreteness of ethical norms.

71:6.25

TITLE: "Technology and Manpower in Nonelectrical Machinery"
AUTHOR: Floyd T. O'Carroll
PUBLISHER: Monthly Labor Review, Vol. 94, No. 6, June 1971, pp. 56–63.
KEY WORDS: Adjustments; Micro, Management Practices, Labor Demand, Skill Requirements, Employment, Collective Bargaining; Private Policy (Retraining, Apprenticeship, Advance Notification, S.U.B., Job Content, Fringe Benefits), Empirical (Tables), Descriptive (Ongoing Trends, Future Trends); Footnotes (Moderate), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A study of the impact of new technology in the nonelectrical machinery industry and the resultant effects on manpower requirements. Methodology — Reliance is placed on numerous statistics to demonstrate the output of various types of equipment, technological obsolescence of equipment, and annual changes in employment in the industry. Major Conclusions — The main findings of this study are that (1) the rate of expansion of the industry's output is expected to decline, (2) the pace of technological innovation will quicken, (3) manpower needs for the industry will decline, (4) those finding employment in the industry will require a higher skill level than previously, i.e. most of the growth in employment will be on the professional and technical level, and (5) various collective-bargaining arrangements have been incorporated into recent contracts to soften the blow of automation.

The author calls upon management to be more imaginative in its handling of technological change and obsolescence. Effective and timely training programs will be necessary to ensure that workers are prepared to meet the new requirements.

71:6.30

TITLE: "Rationalization Problem, A New Form of Adjustment System in Employer-Union Relationships"
AUTHOR: Tsuneo Ono
PUBLISHER: In The Japan Institute of Labor, Annual Report on Japanese Employer-Employee Relationships, 1971, Tokyo, The Japan Institute of Labor, 1971, pp. 258-266. (in Japanese)
KEY WORDS: Adjustments; Micro, Japan, Collective Bargaining, Union-Management Powers; Private Policy (Labor-Management Cooperation, Retraining); Descriptive (Ongoing Trends); Footnotes (None), Bibliography (None); Abstract.
ABSTRACT: Scope and Level — An analysis of the new developments in employer-union relationships during the rationalization of business operations from 1960 to 1970. An emphasis is placed on the process in which labor unions gradually decided to participate in the decision making process of management so as to alleviate the worker adjustment during technological change. Methodology — A short summary of the new worker adjustment system in which labor unions play an important role by participating in the decision making process with management. Major Conclusions — During the latter part of the 1950's and the early part of the 1960's, there was considerable fear and objection by the labor unions that the mechanization and automation of business operations would result in a major displacement of labor, aggrevating the employment problem. The initial stage of automation during the 1950's in the chemical industry, and especially in mining, had in fact resulted in major labor displacement. Consequently the union attitude towards rationalization was absolute objection to it. However, due to a rapid change has not resulted in any major labor displacement. Reduced labor requirements for production have been offset by increased labor requirements for increased product demand. With this more favorable background, the new Japanese employment adjustment systems developed during the latter part of the 1960's. The new system consists of an establishment of an employer-union consulting committee, which determines (bargains) a reduced manpower requirement for the new production-operation system. According to the 1970 survey, over 87 percent of firms with more than 1,000 employees held the above committee meetings, and about 92 percent of the firms obtained consent, or conditional consent, from the union. For successful adoption of the rationalization, the new consensus developed between the employer and union; first the maximum avoidance of presently-employed worker lay off, a gradual reduction of workers by natural attrition is preferred; second workers with obsolete skills will be shifted from their old occupational category into a new occupational category by intra-firm retraining; if the retraining is not available at the firm, the worker will obtain retraining at an outside school with all expenses paid by the firm; third, when a new production/operation system is installed, a simultaneous adoption of shorter work time will be introduced.

The author argues that these new worker adjustment systems greatly reduced the objections from the labor union, and were the main reason for the smooth adoption of technological change during the latter part of the 1960's.

71:6.50

TITLE: "Collective Bargaining and Technological Change on American Railroads"
AUTHOR: Charles M. Rehmus
PUBLISHER: Part II in Collective Bargaining and Technological Change in American Transportation, Evanston, Illinois, The Transportation Center at Northwestern University, 1971.
KEY WORDS: Adjustments; Historical, Railroad Industry, Labor-Management, Government, Collective Bargaining, Union-Management Powers, Private-Public Relations, Unemployment; Private Policy (Layoff Notification, Job Security, G.A.W., Paygrades, Attrition, Seniority), Public Policy (Public Representation in Bargaining, Compulsary Bargaining); Descriptive (Past Trends, Ongoing Trends, Future Trends), Empirical (Tables); Footnotes (Moderate), Bibliography (None); Abstract.
ABSTRACT: Scope and Level — A historical discussion of recent trends in the railroad industry. Methodology — A descriptive analysis of past, current and projected trends in the railroad industry placing special emphasis on the nature of regulation, collective bargaining and government intervention, and adjustments to technological change by government, management and unions. Major Conclusions — Technological change has progressed rapidly in American railroads improving railroad profitability in the 1960's. The railroad brotherhoods have not in any significant way impeded the introduction of changed and improved technology. Collective bargaining difficulties have resulted from the unions efforts to cushion the adverse impact of change upon the members and to ask for remaining employees a share of the substantial productivity increases.

Technological change has caused a decline in total output causing many railroad crafts to be adversely affected and has caused difficult periods adjusting to innovation. Yet these problems have not halted innovation or the general dispersion of gains. The recurrent collective bargaining crisis in the industry should not blind us to the fact that the industry and its unions have largely accomodated, through collective bargaining, to what has been an immense loss of job opportunities.

These adjustments were accomplished in a unique collective bargaining environment in that public policy does not tolerate the right to strike in railroads. This has resulted in the influence of neutrals on railroad bargaining and the kinds of adjustments that have been made. It is not at all clear that the industry and its unionized employees are incapable of adjusting to still further change.

71:7.00

TITLE: "Leisure and Work in Postindustrial Society"
AUTHOR: David Reisman
PUBLISHER: in Jack D. Douglas, ed., The Technological Threat, Englewood Cliffs, N.J., Prentice-Hall, 1971, pp. 71-91.
KEY WORDS: Adjustments; Historical, Leisure, Professional Workers, Post-Industrial Society, Blue Collar, Unemployment, Job Satisfaction; Private Policy (Shorter Work Week, Work Rules, Pay Incentives, Job Content), Public Policy (Fiscal Policy, Planning, Education); Theoretical Discussion; Footnotes (Many), Bibliography (None); Abstract.
ABSTRACT: Scope and Level — A discussion of the role of leisure and work in American life. Methodology — The paper discusses the uneven distribution of leisure in terms of differential attitudes toward work in different occupational groups. It goes on to theorize on needs and wants; how they are generated and how well they are met. Major Conclusions — The author concludes that for many people today, suddenly acquiring large amounts of leisure amounts to technological unemployment; their education has not prepared them for it. An emphasis should be placed on teaching people to use their leisure creatively accompanied by readjustment of jobs to be more demanding and creative. This will enable leisure and work to merge more in the future. It seems that this reordering will be a difficult task because the interest is low in such restructuring among unions and management alike.

From blue collar workers to professionals there seems to be a tendency toward a greater interest in life outside work than in work itself. This is manifested by moves to the suburbs and less desire to put in long hours.

Although the quality of life is increasingly more important to Americans, not much is being done about it. Social inventiveness tends to be channeled into the defense of past gains rather than into ideas for a better proportionality between leisure and work.

71:7.25

TITLE: "Office Automation: Stimulus or Deterrent to Clerical Growth"
AUTHOR: L. A. Robinson
PUBLISHER: Personnel Journal, Vol. 50, No. 11, November 1971, pp. 846-855.
KEY WORDS: Adjustments; Micro, Clerical Workers, Employment; Private Policy (Attrition, Retraining, Relocation); Empirical (Tables), Descriptive (Ongoing Trends); Footnotes (None), Bibliography (Moderate); Abstract.

ABSTRACT: Scope and Level — A study of the impact of automation on clerical workers. Methodology — Utilizing both existing data and predictions of future trends, the author reaches his conclusion concerning the future labor situation for clerical employees. Major Conclusion — The major conclusion drawn is that the unemployment impact of automation on the clerical worker has been way overdone. Although he concedes that the rapidity of growth in this employment category may have been held down somewhat by the adoption of new techniques, he feels it is experiencing and will continue to experience a healthy growth rate. Concomitantly, in those cases where there were some initial displacement effects, most companies have allowed normal clerical labor turnover to absorb the impact of automation. Other firms have chosen to retrain or relocate their workers if a sufficient number could not be phased out by normal attrition techniques.

71:7.50

TITLE: "Problems of Scientific and Technological Progress"
AUTHOR: A. Rumiantsev
PUBLISHER: Problems of Economics, Vol.13, No.12, April 1971, pp.25-45.
KEY WORDS: Adjustments; Macro, U.S.S.R.; Public Policy (Manpower Programs, Relocation); Descriptive (Past Trends, Ongoing Trends, Future Trends); Footnotes (Few), Bibliography (None); No Abstract.

71:8.00

TITLE: "A New Perspective on World Trade"
AUTHOR: Howard D. Samuel
PUBLISHER: American Federationist, Vol. 78, No. 6, June 1971, pp. 10-14.
KEY WORDS: Adjustments; General Equilibrium, Electronics Industry, Textile Industry, Unemployment; Public Policy (Foreign Trade Policies); Descriptive (Ongoing Trends, Future Trends); Footnotes (None), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — The basic argument advanced here is that a continuation of present policy toward our international trade sector will spell ruination for the American worker. The villain in the piece is the outmoded theory of Ricardo called "comparative advantage," which is no longer applicable because of the rationalization of advanced technology. Methodology — The present trend in the dispersal of technology is rapidly changing the situation in most undeveloped countries to a position where they have advanced technology, sufficient capital (often supplied by United States international corporations) and low wages. The author sees the future as being even more bleak than the present. Major Conclusion — Since we have no qualms about passing economic controls to regulate internal affairs, e.g. the various regulatory commissions, fair prices, etc., we should accept a more rigorous control over our international trade sector. The suggested mechanism of control is a more rigorous system of quotas that would suppress the importation of various commodities which have a severe impact on the American workforce.

71:8.25

TITLE: "Labor's Decade - Maybe"
AUTHOR: Brenda Sexton and Patricia Sexton
PUBLISHER: Dissent, Vol. 18, No. 4, August 1971, pp. 365-374.
KEY WORDS: Adjustments; Unions, Blue Collar, Younger Workers, Blacks, Collective Bargaining, Union-Management Powers; Public Policy (Public Employment Programs, Income Redistribution); Descriptive (Past Trends, Ongoing Trends); Abstract.

ABSTRACT: Scope and Level — A descriptive analysis of past and present trends in the labor movement and expected outcome for the seventies.

Major Conclusions — Labor can be expected to achieve renewed strength in the seventies because many Americans want change in the society and labor is driven to use its power to win social change. The labor movement has been supplied with fresh momentum by the newly organized, black, the young, the public workers and Southerners. The effect of the organization of large numbers of workers, particularly blue-collar workers, is to increase the pressure on unions to campaign for a redistribution of wealth and income. Rising labor costs resulting from unionization also will create pressure for technological innovation and improvement in public employment.

Although the history of unions is scarred by racial discrimination and corruption, unions have begun to turn in a progressive direction. During the late fifties they experienced uncertain and difficult periods due in part to the Eisenhower policy of combating inflation by raising unemployment, and partly to assault by conservatives as a result of the McCarthy era and the McClellan hearings. Union outlook improved and its membership was revived and continues to grow. The solid strength of unions has underwritten a kind of political and social freedom not previously enjoyed by workers and has provided workers with some social change.

The authors believe that the obituaries for workers and their unions have been premature, based principally on superficial reading of available materials and distorted inferences drawn from short-term trends.

71:8.50

TITLE: Automation and Alienation: A Study of Office and Factory Workers
AUTHOR: Jon M. Shepard
PUBLISHER: Cambridge, Mass. and London, The MIT Press, 1971.
KEY WORDS: Adjustments; Micro, Office Workers, Blue Collar, Alienation of Workers, Job Satisfaction, Work Attitudes, Work Relationships; Private Policy (Job Content, Working Conditions); Empirical (Sample), Descriptive (Ongoing Trends, Future Trends); Footnotes (Many), Bibliography (Large); Abstract.

ABSTRACT: Scope and Level — An in-depth study of working conditions and the resultant alienation of office and factory workers. Methodology — The authors utilized questionnaires to allow workers to express their feeling on numerous topics such as: powerlessness, meaninglessness aspects their job, etc. Major Conclusion — The main finding of this study is that research that focuses solely on immediate job content is of little value. What is necessary, if we are to gain a meaningful insight into the problem of work attitudes, is research that investigates the relationship between work attitudes and the total job situation. This would include investigating such topics as, interpersonal relations on the job, pay, security, supervision, working conditions, promotion, and unions, so that we can gain a balanced perspective to account for all the variations in attitudes toward work.

71:9.00

TITLE: "Collective Bargaining Trends and Patterns"
AUTHOR: James L. Stern
PUBLISHER: ~~In~~ A Review of Industrial Relations Research, Madison, Wisconsin, Industrial Relations Research Association, 1971.
KEY WORDS: Adjustments; Historical, Micro, Unions, Collective Bargaining; Private Policy (S.U.B., Retraining, Transfer Options, Relocation, Advance Notification, Severance Pay, G.A.W., Paygrades); Review of the Literature; Footnotes (Many), Bibliography (None); Abstract.
ABSTRACT: An extensive review of the literature on collective bargaining over the last few years, with a section on automation and the various collective-bargaining techniques used to offset its impact.

70:0.10

TITLE: Age, Work and Automation, updated report of an international colloquium held at Semmering, Austria, June 1966.
PUBLISHER: Basel, New York, S. Karger AG, 1970.
KEY WORDS: Adjustments; Macro, Older Workers, Unemployment; Private Policy (Early Retirement, Retraining), Public Policy (Manpower Programs); Theoretical Discussion, Empirical (Tables); Footnotes (None), Bibliography (Small); Abstract.
ABSTRACT: Scope and Level — This book is divided into two major sections; the first part examines the medical, psychological, and social aspects of work for the aged; the second part deals with the economic aspects of work for the aged. Methodology — Relying heavily on statistics, the authors attempt to document the economic status of older workers, the trend toward early retirement, and older worker utilization patterns. Major Conclusions — The major conclusions drawn by these authors are that (1) the Federal Government must make a concerted effort to ensure retirees a livable retirement income, and (2) more attention should be paid to the housing and recreational needs of the older population which is retiring at an earlier age.

The major hypothesis established is that automation is making it progressively more difficult for older workers to adjust their life style to meet changing employment requirements that are induced by automation.

Although some attention is paid to the changing utilization patterns of older workers, the authors make a plea for more research in the area so that an in depth, cross-sectional analysis of the problem can be made in the future.

70:0.20

TITLE: "Automation Abstracts"
PUBLISHER: International Labour Review, Vol.101, No.1, January 1970, pp.99-;08.
KEY WORDS: Adjustments; Review of the Literature; Abstract.
ABSTRACT: The International Labour Review has abstracted 32 items that it received during the period January to June 1969. In so far as possible, the items are restricted to those providing new information or original analysis in this field, with due regard for a broad coverage of countries and sources.

70:0.25

TITLE: "Technical Progress and the Movement of Personnel in Industry"
AUTHOR: T. Barenenkova
PUBLISHER: Problems of Economics, Vol. 13, No. 5, September 1970, pp. 23-43.

KEY WORDS: Adjustments; Macro, U.S.S.R., Case Study, Employment; Private Policy (Automation Fund, Work Rules), Public Policy (Relocation, Unemployment Compensation, Manpower Programs); Theoretical Discussion, Descriptive (Past Trends, Ongoing Trends); Footnotes (None), Bibliography (None); Abstract.

ABSTRACT: Soviet industry must increase production while reducing direct labor involved. This has been avoided by firms because the size of the incentive fund is dependent on the size of the planned wage fund. By limiting the wage fund, the base for calculating normative deductions for socio-cultural measures and housing construction as well as for bonus funds for the introduction of new equipment is reduced.

An experiment by Shchekino has found that release of personnel operates smoothly by increasing the material incentive fund of the collective from the savings in wage payments. These savings are also used for bonuses, additional payments, etc. Such releases have had other positive effects: improved organizations, productivity increases, average wage increases.

The enterprises involved in this experiment also have developed long-range, three year, plans calculating the planned number of personnel to release and their occupational composition, time and place of release and retraining plans. In so doing, they determine personnel requirements at other enterprises.

70:0.50

TITLE: "Reorientation of Attitudes of Employers, Trade Unions, and Employees to Changing Job Content"
AUTHOR: Sir Dennis Barnes
PUBLISHER: Chapter 6 in Technological Change and Human Development, Ithaca, New York State School of Industrial and Labor Relations, Cornell University, 1970, pp. 124-143.
KEY WORDS: Adjustments; Historical, Great Britain, Railroad Industry, Shipping Industry, Coal Mining Industry, Oil Industry, Occupational Structure, Low Skilled Workers, Unemployment, Collective Bargaining; Private Policy (Layoff Notification, Retraining, Transfer Options, White Collar Unionization, Pay Incentives, Labor-Management Cooperation); Public Policy (Unemployment Compensation, Manpower Programs, Planning); Theoretical Discussion, Empirical (Tables), Descriptive (Ongoing Trends); Footnotes (None), Bibliography (None); Abstract.
ABSTRACT: Scope and Level — The main topics of this article are first, a glance at the changing composition of the workforce, and second, the author's view of how to make the impact of technological change less difficult on those groups most effected. Methodology — Heavy reliance is placed on statistics to demonstrate the changing occupational structure of modern-day Great Britain. This is followed by a theoretical discussion of the proper policies to be adopted by management, unions, and government. Major Conclusion — The major conclusion drawn is that the policies, heretofore formulated by both the private and public sector have often been initiated with little foresight into future problems. The recommendation then is for more carefully thought out long run solutions.

Over the long run we must analyze such problems as, the relationship between giant corporations and the government, and the social difficulties created as a few men are solely responsible for the manufactured output of the nation.

7

70:0.75

TITLE: "Humble Takes a Look at Man's Role in Automated Production"
AUTHOR: W. B. Bleakley
PUBLISHER: Oil and Gas Journal, Vol.68, September 14, 1970, pp.78-81.
KEY WORDS: Adjustments; Micro, Case Study, Oil Industry, High Skilled Workers; Private Policy (Retraining); Descriptive (Ongoing Trends); Footnotes (None), Bibliography (None); No Abstract.

70:1.00

TITLE: "Technology and Human Relations"
AUTHOR: Leonard Broom and Philip Selznick
PUBLISHER: In Simon Marcson, ed., Automation, Alienation, and Anomie, New York, Harper and Row, 1970, pp.11-27.
KEY WORDS: Adjustments; Historical, Macro, Micro, Printing Industry, Automobile Industry, Chemical Industry, Unskilled Workers, Semiskilled Workers, Skilled Workers, Blue Collar, White Collar, Union-Management Powers, Blue Collar-White Collar, Skill Requirements, Work Relationships, Work Time, Job Satisfaction, Education Requirements; Private Policy (Labor-Management Cooperation, Skill Requirements); Theoretical Discussion, Empirical (Tables, Sample), Descriptive (Ongoing Trends, Futurist Views); Footnotes (Few), Bibliography (None); No Abstract.

70:1.50

TITLE: "Work and Work Motivation in an Automated Industrial Production Process"
AUTHOR: R. A. Bruyns
PUBLISHER: Management International Review, Vol.10, No.4-5, 1970, pp.49-61.
KEY WORDS: Adjustments; Macro, Management Practices, Job Content, White Collar, Blue Collar; Theoretical Discussion, Theoretical Model; Footnotes (None), Bibliography (Medium); No Abstract.

70:2.00

TITLE: "Technology and Managerial Obsolescence"
AUTHOR: Elmer H. Burack and Gopal C. Pati
PUBLISHER: Michigan State Business Topics, Vol. 18, Spring 1970, pp. 49-56.
KEY WORDS: Adjustments; Macro, Labor-Management, Hours of Work, Education Requirements, Union-Management Powers; Private Policy (Retraining, Labor-Management Cooperation, Pay Incentives, Counseling), Public Policy (Manpower Forecasting, Education); Theoretical Model, Descriptive (Ongoing Trends); Footnotes (Few), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A study of managerial obsolescence and ways to combat it. Methodology — The authors develop a flow-chart-like model to explain the underlying causes that lead to obsolescence of companies, individuals and finally society. Most of their conclusions follow either from their model or from an analysis of ongoing trends in industry. Major Conclusions — The main finding of this study is that manpower planning and development is a critical area of managerial and staff responsiblity. Also, companies should provide formal training and developmental programs and see that employees take advantage of them. This can be accomplished through modifying the hours of work, providing positive incentives, or extensive counseling for non-motivated employees. Some of the policy recommendations made are: 1) more union-management coordination to devise advanced plans to deal with the changes in the nature of work requirements arising from changing technology; 2) society in general should make a greater effort, through the educational system, to keep in tune with new scientific developments and their applications.

70:3.00

TITLE: "Technological Changes in the Printing and Publishing Industry"
AUTHOR: Robert V. Critchlow
PUBLISHER: Monthly Labor Review, Vol. 93, No. 8, August 1970, pp. 3-9.

KEY WORDS: Adjustments; Historical, Printing Industry, Labor-Management, Case Study, Occupational Structure, Employment, Unemployment, Collective Bargaining, Union-Management Powers, Blue Collar-White Collar, Skill Requirements; Private Policy (Relocation, Retraining, Severance Pay, Planning, Pension Rights, Job Security, S.U.B., Early Retirement, G.A.W., Labor-Management Cooperation, Shorter Work Week, Innovation Timing, Attrition, Vacations, Union Mergers); Descriptive (Past Trends, Ongoing Trends, Future Trends, Case); Footnotes (Few), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — An analysis of the effects of technological change on various occupation and skill groups in the printing and publishing industry from 1947-1969 with tentative projections for the 1970's. Major focus is on private union and management response to labor-saving innovations in the form of new contract provisions. Methodology — A descriptive analysis relying on government reports and statistics, as well as others' analyses. Major Conclusions — Technology will continue to advance rapidly in the printing and publishing industry, with innovations being introduced primarily in newspapers of all sizes and in medium-to-large commercial, book, and periodical printers where their volume may return economic savings to justify large outlays. Employment for the industry as a whole will increase through 1975, as growth in jobs for press operators and lithographic platemakers offsets declines for typesetters and other groups.

The principal responses to the introduction of the new technologies have been retraining and job security efforts by unions, informed on-the-job training as well as comprehensive training programs by management, the establishment of formal organizations to study the effects of automation by unions, and a series of union mergers to avoid jurisdictional disputes. A more recent response has been the joint effort of unions and management to determine how the benefits of automation can be spread among employers and employees.

Based upon Union investigation into manpower implications extensive union training programs and early retirement benefits have been established to prevent jurisdictional disputes between unions where new technologies have cut across traditional craft lines. This allows for a more unified bargaining position and has possibly provided success in the featherbedding contracts.

In the 1970's displacement will probably continue to occur in certain occupations in the industry, but it will be mitigated somewhat by increases in the demand for printed products, attrition, a slower rate of diffusion of technological change, and extensive retraining.

70:3.50

TITLE: "Incomes Policy and Sharing in Capital Gains"
AUTHOR: J. Rodney Crossley
PUBLISHER: Chapter 9 in Technological Change and Human Development, Ithaca, New York, New York State School of Industrial and Labor Relations, Cornell University, 1970, pp. 215-236.
KEY WORDS: Adjustments; General Equilibrium, Case Studies, Great Britain, West Germany, Italy, Netherlands, Distribution of Income, Wage Effects, Unions, Collective Bargaining; Private Policy (Pay Incentives), Public Policy (Capital Taxation); Theoretical Discussion, Descriptive (Ongoing Trends); Footnotes (Few), Bibliography (None); Abstract.
ABSTRACT: Scope and Level — A study of the feasibility of corporations adopting an Investment Pay Program. The need for such a program is a direct result of technological progress and the relative increase in property (ownership) income. Methodology — A theoretical discussion utilizing case studies from several European countries to analyze the various types of investment pay schemes that could be adopted, e.g. where the company invests part of the workers pay in shares of their own or other companies stock. There is also a lengthy discussion of the ramifications of this type of income redistribution scheme on the level of national savings. Major Conclusion — The prospects for a rapid redistribution of the ownership of wealth by means of investment pay schemes do not appear to be high.

Whether this analysis is correct or not remains to be seen but in the interim, unions will have to decide whether the proper avenue for these schemes is via collective bargaining or through the institution of government programs.

70:3.55

TITLE: "A Trade Unionist's View of Innovation"
AUTHOR: Lord Delacourt-Smith
PUBLISHER: Chapter 19 in Maurice Goldsmith, ed., Technological Innovation and the Economy, London, Wiley-Interscience, 1970.
KEY WORDS: Adjustments; Macro, Great Britain, Collective Bargaining, Skill Requirements, Job Content; Private Policy (Labor-Management Cooperation, Working Conditions, Job Security), Public Policy (Manpower Programs, Education); Theoretical Discussion; Footnotes (None), Bibliography (Small); Abstract.

ABSTRACT: Scope and Level — A broad view of automation and its impact on various areas of concern to workers. Methodology — A theoretical discussion of what the author feels should be done to alleviate some of the stress and insecurity that is caused by rapidly changing modes of production. Major Conclusions — The main conclusion drawn from this study is that since the work force is composed of various types of individuals with varying needs, management's method for smoothing the transition to technological innovation would be to adopt a multivariate approach.

In addition to the standard demands of workers, e.g. higher wages, better working conditions etc., increasing attention should be paid to factors such as increased security and the quality of life. Also needed is a deemphasis of specialized skills, which may become outmoded in a short period of time, and a return to a more generalized education that allows the recipient to adapt to changing skill requirements.

One of the major policy recommendations made by this paper is that joint consultation between management and labor is the most fruitful way of alleviating future labor disputes over automation.

Another recommendation is that the concept that shareholders alone are entitled to express a view on the composition of the board of directors of the enterprise should be re-evaluated. The extension of board determination privileges to the workers might facilitate worker cooperation and lend itself to strengthening the productiveness of the board of directors.

70:3.60

TITLE: "Structuring Occupational Education Programs"
AUTHOR: George H. Ditlow
PUBLISHER: *Theory into Practice*, Vol.9, No.5, December 1970, pp.284-287.
KEY WORDS: Adjustments; Micro, Private-Public Relations; Private Policy (Retraining), Public Policy (Education); Theoretical Discussion; Footnotes (Few), Bibliography (None); No Abstract.

70:3.65

TITLE: Historical Perspective of the Florida Citrus Industry and the Impact of Mechanical Harvesting on the Demand for Labor

AUTHOR: J. Kamal Dow

PUBLISHER: Gainsville, Florida, Department of Agricultural Economics, University of Florida, April 1970.

KEY WORDS: Adjustments; Micro, Farm Workers, Minority Group Workers, Non-white Workers, Skilled, Unskilled, Older Workers, Unemployment, Capital-Labor Ratio, Skill Requirements; Private Policy (Retraining, Planning), Public Policy (Planning, Education, Counseling, Manpower Programs); Theoretical Model, Empirical (Tables), Descriptive (Ongoing Trends, Future Trends); Footnotes (Moderate), Bibliography (Small); Abstract.

ABSTRACT: Scope and Level — A case study of the Florida citrus industry and the projected impact of technological change on the demand for labor in the industry. Methodology — Attention was focused on the economic and physical features of the different harvesting systems, the state of the art in general and the possible mechanization patterns. A model was used to make an economic comparison of the different mechanical systems with the manual system based on variables such as harvesting efficiency, price on inputs and operating costs. In addition, past trends in the characteristics of the citrus harvesting labor force, productivity, and labor requirements were used to calculate future labor requirements (with mechanization) both total and by skill category. Major Conclusions — The major finding of this study is that if the present trends continue it will be economically advantageous to introduce mechanical harvesting systems by 1975 or before. But because of management's reluctance to introduce new systems and the availability of cheap labor, only 10 percent of the industry will be mechanized by the 1975-76 season. By 1980, it is estimated that between 20 and 30 percent of the grapefruit industry and 50 to 60 percent of the orange industry will be mechanized.

The impact of this mechanization on the demand for labor will thus be slow to materialize, but by 1980 sizable shifts in the skill composition of the required labor force will have taken place. For instance it is estimated that by 1980 the demand for less-skilled workers will have fallen by 15 percent during the peak months, while the demand for skilled and semi-skilled workers will double.

Clearly then, the major recommendation of this study is for management, labor and government to seize the opportunity that presently exists, because of the slowness of the introduction of new technology, to institute training and education programs that will allow the labor force to adapt to new skill requirements.

The most difficult group to reorient will be the older, especially non-whites, workers who do not have a sufficient education to allow them to make easy intra- or inter-industry shifts. For those who cannot make the transition, it is suggested that other sources of employment, especially during the off-season, be found.

70:3.75

TITLE: "Trends in Plant and Company Bargaining"
AUTHOR: J. Gennard and B. C. Roberts
PUBLISHER: Scottish Journal of Political Economy, Vol.17, No.2, June 1970, pp. 147-166.
KEY WORDS: Adjustments; Micro, Great Britain, Labor-Management, Government, Collective Bargaining; Private Policy (Work Rules, Pay Incentives); Empirical (Tables), Descriptive (Past Trends, Ongoing Trends, Future Trends); Footnotes (None), Bibliography (Small); No Abstract.

70:6.00

TITLE: "Manpower Implications of Computer Control in Manufacturing"
AUTHOR: Arthur S. Herman
PUBLISHER: Monthly Labor Review, Vol. 93, No. 10, October 1970, pp. 3-8.
KEY WORDS: Adjustments; Micro, Manufacturing, Case Study, Computers, Occupational Structure, Employment, Skill Requirements, Work Rules, Wage Effects, Education Requirements, Labor Mobility; Private Policy (Relocation, Retraining, Planning, Labor-Management Cooperation, Advance Notification, Transfer Options, Paygrades, Layoff Notification, Innovation Timing, Job Content, Skill Requirements, Mediator); Empirical (Tables, Cases), Descriptive (Ongoing Trends, Future Trends); Footnotes (Few), Bibliography (None); Abstract.
ABSTRACT: Scope and Level — This study is based upon a Bureau of Labor Statistics 12-plant case study of the employment impact, by skill and education level, of the introduction of computers to direct control of industrial production processes and manufacturing operations in six process industries, including chemicals, steel, petroleum, electrical equipment, paper, and cement in 1970. Primary emphasis is on worker displacement, job modification, job creation, and retraining efforts. Methodology — A descriptive analysis relying on a B.L.S. case study of 12 plants in the process industries. Major Conclusions — Little worker displacement occurred due to the installation of computers, largely because automatic processes were introduced in these industries over the preceeding two decades resulting in already reduced work crews. The main impact has been the modification of job duties within the plant, leading to some job creation at higher skill levels (and increased wages for retrained employees), but little net change either in employment or wage rates at the lower skill levels.

Introduction of computers into the process industries is expected to continue in the future resulting in a gradual decline in the demand for labor, particularly at the lower skill levels.

70:6.50

TITLE: "The Management of Automation: Issues and Responsibilities"
AUTHOR: George Horrigan
PUBLISHER: Material Handling Engineering, Vol.25, August 1970, pp.72-80.
KEY WORDS: Adjustments; Micro, Labor-Management, Government; Private Policy (Layoff Notification, Early Retirement, Severance Pay, Retraining, Attrition); Descriptive (Past Trends); Footnotes (None), Bibliography (None); No Abstract.

70:7.25

TITLE: Vocational Training in Japan, 1970, especially Chapter 5, "Vocational Training Plan" and Chapter 6, "Present Status of the Vocational Training System"

AGENCY: Japanese Vocational Training Bureau

PUBLISHER: Tokyo, Japan, The Ministry of Labor, Vocational Training Bureau, 1970. (in Japanese)

KEY WORDS: Adjustments; Macro, Japan, Skill Requirements; Public Policy (Vocational Education, Manpower Programs); Descriptive (Ongoing Trends); Abstract.

ABSTRACT: Scope and Level — A comprehensive survey of vocational training in Japan, especially the public training system. Methodology — A brief review of the development of a vocational training system and a discussion of governmental actions to produce skilled workers required for Japanese industry. Major Conclusions — Until the new vocational training law (NVTL) was enacted 10 October 1969, the emphasis on vocational training was placed on how to secure the skilled labor force necessary for economic growth. The NVTL expanded its scope to train skilled workers and also to cope with the change in necessary skills resulting from the development of technological change. There are two programs that are specially designed for job-converters who seek after new jobs as a result of technological change; one is occupational capacity re-development training and the other is update training. Occupational capacity re-development training is designed for skills which take a longer time to acquire, about a year. Updating training is training of a shorter duration, about a week.

These two types of training are free of charge and the duration of unemployment insurance benefits is extended until the end of the training. For those who exhausted their unemployment benefits, some income assistance is provided. 26,000 trainees completed their training during the 1969 fiscal period. In general, the governmental vocational training system is discussed in detail in the article but its overall effectiveness is not assessed.

70;7.50

TITLE: "A Role to Play in Manpower Development"
AUTHOR: Edward Kabakjian
PUBLISHER: The Journal of Industrial Arts Education, Vol.29, No.5, March-April 1970, pp.36-39.
KEY WORDS: Adjustments; Macro, Micro, Labor-Management, Skill Requirements, Unemployment, Disadvantaged Workers; Public Policy (Education Manpower Programs); Theoretical Discussion; Footnotes (Few), Bibliography (Small); No Abstract.

70:8.00

TITLE: "Automation and Labor Relations"
AUTHOR: Everett M. Kassalow
PUBLISHER: in Simon Marcson, ed., Automation, Alienation, and Anomie, New York, Harper and Row, 1970, pp. 278-293.
KEY WORDS: Adjustments; Historical, General Equilibrium, Macro, Micro, Unions, Meatpacking Industry, Automobile Industry, Steel Industry, Longshoremen , Office Workers, Blue Collar, White Collar, Unskilled, Skilled, Employment, Unemployment, Collective Bargaining, Union-Management Powers, Blue Collar-White Collar, Skill Requirements, Work Rules, Work Relationships, Work Time, Hours of Work, Fringe Benefits, Earnings, Labor Mobility, Job Satisfaction; Private Policy (Relocation, Retraining, Severance Pay, Planning, Pension Rights, S.U.B., G.A.W., Early Retirement, Labor-Management Cooperation, Shorter Work Week, Paygrades, White Collar Unionization, Job Security, Skill Requirements, Mediator), Public Policy (Full Employment, Fiscal Policy, Urban-Regional Policy, Manpower Programs, Unemployment Compensation, Education); Review of the Literature, Empirical (Sample, Cases), Descriptive (Past Trends, Ongoing Trends, Future Trends); Footnotes (None), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A discussion of public and private policy responses to automation up to the early 1960's, with particular emphasis on the adjustment of blue collar workers in a number of mass-production industries. Methodology — A descriptive analysis relying on government reports and statistics, as well as case studies and articles. Major Conclusions — Two of the myths about automation put forth in the mid-1950's appear to have been refuted: the myth that more machines means more jobs, and that automation leads to a reduced, upgraded labor force. Automation appears to be undermining the industrial and political strength of trade unions by diminishing the size of the blue collar work force relative to the white collar work force.

A necessary part of any policy of adjustment to automation involves a vigorous full employment effort. In addition, public policies to aid the development of the supply of labor are also required, including retraining, unemployment compensation, general manpower programs, and education.

The private response to automation has included relocation and retraining allowances, job security measures, and early retirement. In the future, increased reliance should be placed on white collar unionization, joint union-management committees, and the use of third parties, including mediators and fact finders.

70:9.00

TITLE: "Industrial Relations and Automation"
AUTHOR: Charles C. Killingsworth
PUBLISHER: in Simon Marcson, ed., Automation, Alienation, and Anomie, New York, Harper and Row, 1970, pp. 243-259.
KEY WORDS: Adjustments; Historical, Macro, Micro, Meatpacking Industry, Rubber Industry, Airline Industry, Automobile Industry, Steel Industry, White Collar, Blue Collar, Unskilled, Skilled, Employment, Unemployment, Collective Bargaining, Union-Management Powers, Blue Collar-White Collar, Skill Requirements, Work Rules, Work Relationships, Work Time, Hours of Work, Labor Mobility, Wage Effects; Private Policy (Seniority, Relocation, Retraining, Severance Pay, Planning, Pension Rights, Advance Notification, S.U.B., Shorter Work Week, Paygrades, Job Security, Early Retirement, Labor-Management Cooperation, Mediator, Transfer Options, Work Rules); Descriptive (Ongoing Trends, Future Trends); Footnotes (Few), Bibliography (None); Abstract.
ABSTRACT: Scope and Level — An analysis of the response of the system of industrial relations within the mass-production industries to the changes brought about by automation as of the early 1960's. The emphasis of the paper is on labor and management's adjustment to the rapidly changing work environment of white collar blue collar, unskilled, and skilled workers through the mechanism of collective bargaining. Methodology — The paper is descriptive in nature, relying on the author's direct knowledge of the industries as an arbitrator. Major Conclusions — Through the early 1960's automation was one of the more important factors leading to a decline in the number of blue collar, low skilled jobs, and to a change in the basic work relationship within the mass production industries. One of the results of automation has been an increased emphasis on job security in collective bargaining, including provisions concerning such issues as, advance layoff notification, broadened seniority units, retraining and relocation, S.U.B., and "job freezes" to name a few.

Another result has been the establishment of joint labor-management committees to study ways of adjusting to automation and technological change through collective bargaining.

Up to now the technical characteristics of automation have made it most adaptable to certain operations in industries with efficient arbitration systems and mature collective bargaining relationships. In the future it may have a greater impact on systems that have developed impediments to adjustments of this sort.

70:9.25

TITLE: "Technology: A Force for Social Change"
AUTHOR: Melvin Kranzberg
PUBLISHER: American Vocational Journal, Vol.45, No.2, February 1970, pp.22-23.
KEY WORDS: Adjustments; Micro, Technical Occupations; Public Policy (Vocational Education); Descriptive (Past Trends); Footnotes (None), Bibliography (None); No Abstract.

70:9.30

TITLE: "Challenge to Higher Education of National Manpower Priorities"
AUTHOR: Paul G. Larkin
PUBLISHER: The Journal of Higher Education, Vol.41, No.3, March 1970, pp.195-203.
KEY WORDS: Adjustments; General Equilibrium, Macro, Professional Workers; Public Policy (Education, Counseling, Information, Manpower Programs); Empirical (Tables); Footnotes (Few), Bibliography (None); No Abstract.

70:9.40

TITLE: "Interplant Transfer and Terminated Workers: A Case Study"
AUTHOR: David B. Lipsky
PUBLISHER: Industrial and Labor Relations Review, Vol. 23, No. 2, January 1970, pp. 191-206.
KEY WORDS: Adjustments; Micro, Case Study, Plant Shutdown; Private Policy (Relocation, Severance Pay, Layoff Notification, Transfer Options); Empirical (Regression, Sample, Case), Footnotes (Moderate), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A micro economic analysis of effects of relocation or termination on employees of General Foods. Methodology — A questionnaire was given to terminated and relocated General Foods employees and then was used as the sample in a regression analysis. The regression results are discussed. Main Conclusion — Workers most likely to benefit from the protection of an inter-plant transfer system were least likely to exercise the option of relocation. Workers who least needed the protection were likely to move.

The author looks at the terminated group separately from the transferred group comparing certain characteristics (sex, age, etc.). He is interested in which workers were most likely to transfer to the other plant and among the terminated workers which had the most difficult time finding new employment.

70:9.50

TITLE: "Implementing Automation"
AUTHOR: John J. McNiff
PUBLISHER: Chapter 10 in Automation Management: the Social Perspective, Athens, Georgia, The Center for the Study of Automation and Society, 1970.
KEY WORDS: Adjustments; Micro, Unions, Labor-Management, Sociological and Psychological Effects, Work Rules, Hours of Work; Private Policy (Retraining, S.U.B., Seniority, Transfer Options, Pension Rights, Shorter Work Week, Early Retirement, Advance Notification); Descriptive (Ongoing Trends); Footnotes (None), Bibliography (Small); Abstract.

ABSTRACT: Scope and Level — An examination of automation from the view point of organized labor's response to technological change. Methodology — A descriptive analysis of the general policies adopted by various unions to offset the displacement effects of automation. Major Conclusions — The main conclusion of this paper is that through joint participatory decision making all parties affected by automation can arrive at new solutions to the problems presented by technological change.

In addition to the above mentioned features, this article presents a general summary of the most frequently negotiated adjustment clauses.

The major significance of this paper is the author's insight into the real problem encountered by technological displacement. While the economist and sociologist can take consolation in the fact that although some workers are displaced by automation, other jobs in other areas will become available, the real problem is the psychological trauma faced by a worker who sees his life's work slip out from under him. Often the new jobs that open up require different aptitudes than those possessed by the displaced worker thus making his adjustment extremely difficult if not impossible.

70:10.00

TITLE: "Perspectives on a Positive Manpower Policy"
AUTHOR: Garth L. Mangum
PUBLISHER: in George F. Rohrlich, ed., Social Economics for the 1970's, New York, Dunellen Publishing Company, 1970, pp. 55-64.
KEY WORDS: Adjustments; Historical, Macro, Age Groups, Racial Groups, Women, Employment, Unemployment, Labor Mobility, Education Requirements; Public Policy (Full Employment, Fiscal Policy, Monetary Policy, Income Policy, Manpower Programs, Relocation, Minimum Wages, Legislation, Planning, Education); Descriptive (Past Trends, Ongoing Trends); Footnotes (None), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A discussion of the major factors behind the long-run developments in the employment picture from 1945 to 1970. The focus of the paper is the on manpower programs developed in the 1960's and the lessons learned from experience with those programs. Methodology — A descriptive analysis relying on the author's direct experience in and knowledge of the field. Major Conclusions — There have been four major underlying trends behind employment developments since World War II: technological change, urbanization, the co-existence of poverty and affluence, and constant warfare.

Despite experimentation with a host of different approaches to manpower programs since 1962, including education, retraining, relocation, outreach, and job development, as well as overall policies geared to full employment, we have not found one approach to constitute the solution. Delivery of services and funding procedures still present problems.

70:11.00

TITLE: "Organization Impact of Automation in White-Collar Industrial Units"
AUTHOR: Floyd C. Mann and Lawrence K. Williams
PUBLISHER: in Simon Marcson, ed., Automation, Alienation, and Anomie, New York, Harper and Row, 1970, pp.182-212.
KEY WORDS: Adjustments; Micro, Public Utilities, New York, White Collar, Employment, Work Relationships, Work Time, Hours of Work, Earnings, Job Satisfaction; Private Policy (Retraining, Planning, Attrition, Relocation, Innovation Timing, Overtime, Skill Requirements); Empirical (Sample, Case); Footnotes (Few), Bibliography (None); No Abstract.

70:11.40

TITLE: "Worker's Participation at the Plant, Union, and National Level in Israel"

AUTHOR: Colonel Israel Meidan

PUBLISHER: Chapter 10 in *Technological Change and Human Development*, Ithaca, New York State School of Industrial and Labor Relations, Cornell University, 1970, pp. 247-260.

KEY WORDS: Adjustments; Israel, Micro, Unions, Labor-Management, Collectives, Work Relationships; Private Policy (Labor-Management Cooperation, Retraining); Descriptive (Ongoing Trends); Footnotes (None), Bibliography (Small); Abstract.

ABSTRACT: *Scope and Level* — A view of the role of trade unions in Israel as a force to ease the impact of technology. *Methodology* — Cites the outcome of various experiments at the management and direct and indirect ownership level with regard to trade unions in Israel. *Major Conclusions* — The major finding of this article is that because of the economic and technological necessity for constant change on the one hand, and the instinctive resistance to change and fear of the unknown on the other, the establishment of open communication and trust between workers and management is absolutely essential for the modernization of industry.

Also, the increasing complexity of the industrial process will lead to greater managerial specialization and the lack of appropriate skills will make the question of participation by workers more difficult.

70:11.70

TITLE: "The Social Role of the Unions"

AUTHOR: Yerucham Meshel

PUBLISHER: Chapter 12 in Technological Change and Human Development, Ithaca, New York State School of Industrial and Labor Relations, Cornell University, 1970, pp. 319-330.

KEY WORDS: Adjustments; Macro, Older Workers, Younger Workers, Structural Unemployment, Sociological and Psychological Effects, Labor Mobility, Collective Bargaining; Private Policy (Retraining, Job Content, Multicraft Union), Public Policy (Vocational Education, Full Employment); Theoretical Discussion; Footnotes (None), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A theoretical discussion of the major problems that confront workers as they try to meet the new demands of technological change. The difficulty faced when older, less educated workers work side-by-side with younger workers who have acquired a higher level of technological sophistication is given special treatment. Methodology — The author views the problem created by technological change as one of structural unemployment. Thus, the investigation centers around programs, both private and public, that can help older, more established workers meet the skill requirements of new types of machinery, etc. Major Conclusions — The main conclusions drawn are that there are three major areas of confrontation that must be overcome by trade unions. These confrontations are (1) between the veteran worker and the younger one, (2) between the machine and the worker, and (3) between the worker and the new positions. Only in concentrating on both the social and economic aspects of technological change will we find a solution to these problems.

70:12.00

TITLE: "Technological Change and the Worker"
AUTHOR: Wilbert E. Moore
PUBLISHER: in Simon Marcson, ed., Automation, Alienation, and Anomie, New York, Harper and Row, 1970, pp. 48-53.
KEY WORDS: Adjustments; Historical, Employment, Unemployment, Collective Bargaining, Skill Requirements, Work Relationships, Job Satisfaction; Private Policy (Retraining, Severance Pay, Planning, Labor-Management Cooperation, Job Security); Descriptive (Ongoing Trends, Future Trends); Footnotes (Few), Bibliography (None); No Abstract.

70:13.00

TITLE: Technological Change and Occupational Responses: A Study of Librarians

AUTHOR: Robert Presthus

PUBLISHER: Washington, Department of Health, Education and Welfare, Office of Education, Bureau of Research, 1970.

KEY WORDS: Adjustments; Micro, Librarianship, Women, Job Satisfaction; Private Policy (Planning, White Collar Unionization); Empirical (Tables, Sample); Footnotes (Many), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — An empirical study of librarians, administrators, and clerical workers in libraries to determine their attitudes toward technological change. Methodology — Questionnaires were given to library workers in three types of libraries, academic, public, and special, in four cities to determine attitudes toward their work and receptiveness to change. Major Conclusions — Most librarians react positively to the prospect of automation in its several forms and most of their directors are making specific attempts to prepare them to handle its effects. However, in actual situations, with change directly affecting them, there is not whole-hearted support for change; rather a "wait and see" attitude prevails.

Job satisfaction among librarians was found to be quite low and this could be an impetus to change. However, given the psychological makeup of many librarians change will be imposed from outside the institution. Adjustment will not occur until a new generation of librarians, trained in the new librarianship, is employed.

Another accommodation to the existing situation is for librarians to leave change to the information specialist. But this would mean the end to their aspirations for professional status.

70:13.20

TITLE: "Automation and Leisure Don't Mix"
AUTHOR: Herbert W. Robinson
PUBLISHER: Industry Week, Vol.166, June 15, 1970, pp.33-35.
KEY WORDS: Adjustments; Macro, Leisure; Private Policy (Skill Requirements); Descriptive (Ongoing Trends, Future Trends); Footnotes (None), Bibliography (None); No Abstract.

70:13.40

TITLE: "Mechanized Agriculture and Social Welfare: The Case of the Tomato Harvester"

AUTHOR: Andrew Schmitz and David Seckler

PUBLISHER: American Journal of Agricultural Economics, Vol. 52, No. 4, November 1970, pp. 569-577.

KEY WORDS: Adjustments; Macro, Micro, Agriculture, Tomato Harvesters, Wage Effects, Unemployment, Private-Public Relations; Private Policy (Retraining, Innovation Type), Public Policy (Fiscal Policy, Manpower Programs, Relocation); Empirical (Tables, Cases); Footnotes (Few), Bibliography (Medium); Abstract.

ABSTRACT: Scope and Level — Mechanical harvesting of tomatoes for canning has sharply reduced producers' labor requirements. The paper discusses the social returns to aggregate research and development expenditures for a mechanical tomato harvester. Methodology — The authors trace the development of the mechanical tomato harvester and then calculate the gross social rate of return and net social rate of return to the research and development expenditures on the harvester. Major Conclusion — Gross social returns to aggregate research and development expenditures are in the vicinity of 1,000 percent. Even if displaced labor had been compensated for wage loss, net social returns are still highly favorable. Since tomato pickers were unorganized, no compensation was demanded or paid. The analysis indicates a need for policies designed to distribute the benefits and costs of technological change more equitably. Social scientists could properly be concerned with developing institutional means of achieving this goal.

70:13.90

TITLE: "Automation and Labor"
AUTHOR: Ben B. Seligman
PUBLISHER: in Automation and Management: The Social Perspective, Athens, Georgia, The Center for the Study of Automation and Society, 1970.
KEY WORDS: Adjustments; Macro, Unions, Case Studies, Collective Bargaining, Labor-Management, Government; Public Policy (Manpower Programs, Full Employment, Public Representation in Bargaining); Descriptive (Past Trends, Ongoing Trends); Footnotes (None), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A case study of the methods chosen by several unions to offset the impact of technology. Methodology — The author describes many of the various provisions implemented through the collective bargaining process and discusses separately those concepts which have proved feasible and have enhanced the position of the worker, and programs which have proved to be failures. Major Conclusion — The major conclusion drawn is that most of the responses to automation on behalf of the unions have not really solved the predicaments posed by new technology. In the place of the bilateral collective bargaining procedure the author recommends the adoption of a tripartite base - business, labor, and government - to help find solutions to technological displacement. If the problems of automation can be overcome by simply increasing aggregate demand then this is a job for the government. If the consequences of automation require a down grading of skill requirements, then this becomes a problem for all three parties to hash out.

This article also provides a useful source of information on various contract negotiations between unions and companies as they tried to make the transition to automation easier.

70:14.00

TITLE: "Conventional Views of Employment Effects of Technological Change"
AUTHOR: Ben B. Seligman
PUBLISHER: in Simon Marcson, ed., Automation, Alienation, and Anomie, New York, Harper and Row, 1970, pp.342-360.
KEY WORDS: Adjustments; Historical, Macro, Micro, Agriculture, Steel Industry, Automobile Industry, Unskilled Workers, Skilled Workers, Employment, Unemployment, Skill Requirements, Private-Public Relations, Work Relationships, Wage Effects, Labor Mobility; Public Policy (Full Employment, Monetary Policy, Fiscal Policy, Urban-Regional Policy, Manpower Programs, Information, Education); Review of the Literature, Theoretical Discussion, Empirical (Sample, Cases), Descriptive (Past Trends, Ongoing Trends, Future Trends); Footnotes (None), Bibliography (None); No Abstract.

70:15.00

TITLE: "Clerical Automation and White-Collar Organizing Drives"
AUTHOR: Edward B. Shils
PUBLISHER: in Simon Marcson, ed., Automation, Alienation, and Anomie, New York, Harper and Row, 1970, pp.259-270.
KEY WORDS: Adjustments; Historical, Micro, Blue Collar, White Collar, Employment, Union-Management Powers, Blue Collar-White Collar, Unions, Work Rules, Work Relationships, Fringe Benefits, Earnings; Private Policy (Seniority, Retraining, Planning, Pension Rights, Attrition, Labor-Management Cooperation, Paygrades, White Collar Unionization, Job Security, Layoff Notification, Mediator); Empirical (Sample), Descriptive (Past Trends, Ongoing Trends, Future Trends); Footnotes (Few), Bibliography (None); No Abstract.

TITLE: "Management of Machines and Men in the Automated Plant"
AUTHOR: Edward B. Shils
PUBLISHER: in Simon Marcson, ed., Automation, Alienation, and Anomie, New York, Harper and Row, 1970, pp.310-330.
KEY WORDS: Adjustments; Macro, Employment, Unemployment, Collective Bargaining, Union-Management Powers, Work Relationships, Wage Effects, Earnings, Labor Mobility, Job Satisfaction; Private Policy (Seniority, Relocation, Retraining, Severance Pay, Planning, Pension Rights, S.U.B., Attrition, Early Retirement, Labor-Management Cooperation, Paygrades, Job Security, Layoff Notification, Transfer Options); Descriptive (Ongoing Trends); Footnotes (Moderate), Bibliography (None); No Abstract.

70:17.00

TITLE: "The Changing Form and Status of Labor"
AUTHOR: Irving H. Siegel and A. Harvey Belitsky
PUBLISHER: Journal of Economic Issues, Vol. 4, No. 1, March 1970, pp. 78-94.
KEY WORDS: Adjustments; Macro, Unions, Government, Employment, Collective Bargaining, Blue Collar-White Collar, Fringe Benefits, Hours of Work, Leisure; Private Policy (Retraining, Early Retirement, White Collar Unionization, Shorter Work Week), Public Policy (Full Employment, Monetary Policy, Fiscal Policy, Income Policy, Public Employment Programs, Manpower Programs, Income Maintenance, Education); Theoretical Discussion; Footnotes (Moderate), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A theoretical discussion of the future evolution of labor. Methodology — A discussion of possible ways in which labor and work will change in the future. Major Conclusions — Work, as a category of human activity, is not likely to become obsolete in the near future although concentration of individuals on work will continue to diminish with reduced hours, reduced physical demands, reduced age at retirement, improvements in income maintenance, and the rise in the average level of education.

The needs of the economy are shifting and thus the nature of jobs to be performed will change. There should be a substantial increase in employment in the service industries, especially health care and education.

The authors foresee the government becoming a dominant "employee of first resort" in meeting critical and social needs. Organized labor will continue to have a role in our society.

TITLE: "The Future of Collective Bargaining and the Resolution of Industrial Conflict"

AUTHOR: P. L. Siemiller

PUBLISHER: Chapter 8 in Technological Change and Human Development, Ithaca, New York State School of Industrial and Labor Relations, Cornell University, 1970, pp. 193-204.

KEY WORDS: Adjustments; Macro, Micro, Unions, Unemployment, Collective Bargaining; Private Policy (Shorter Work Week, Vacations, Early Retirement, Severance Pay), Public Policy (Public Employment Programs); Descriptive (Ongoing Trends, Futurists Views); Footnotes (None), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A descriptive analysis of the impact of technological change on various unionized groups, such as the machinists and longshoremen. Methodology — A theoretical discussion as to why the impact of automation has not been as great as it could have been, i.e., because of an ideal demographic composition of American families since World War II and massive defense expenditures. Possible solutions to the problems, that will be encountered when the above mentioned solutions are no longer viable, include shorter work week, early retirement and the creation of public sector service-type employment.

Major Conclusion — The major conclusion is that economists and others are not entirely correct when they say the impact of automation will have very little effect on aggregate employment levels. Indeed only massive defense expenditures and a population heavily skewed in favor of young adults (the ideal composition for household and other consumer demand) has spared the United States from excessively high unemployment rates in the post war period. Collective bargaining, however, can help mollify the impact of automation by pursuing such goals as longer vacations, shorter hours, and retraining for the temporarily displaced. For the public realm the Federal Government should give serious consideration to the creation of a corps of public service employees to aid the old and infirmed.

70:17.50

TITLE: "Political Control of Technology to Preserve Human Values"
AUTHOR: Russell E. Smith
PUBLISHER: The Engineering Economist, Vol. 15, No. 4, Summer 1970, pp. 217-226.
KEY WORDS: Adjustments; Macro, Micro, Agriculture, Sociological and Psychological Effects, Unemployment, Private-Public Relations; Public Policy (Fiscal Policy, Manpower Programs, Public Representation in Bargaining); Descriptive (Ongoing Trends); Footnotes (Few), Bibliography (None); Abstract.

ABSTRACT; Scope and Level — The article considers the need for government control of technology to preserve human values. The underlying assumption is that technology has become a social institution requiring changes and accommodations in other social institutions and, as such, is subject to political control. Methodology — Using agriculture as an example, the author demonstrates that technical problem solving cannot be separated from social problems which may result from technological advances. Major Conclusion — We are now living in a post-industrial society where industry is not the principal employer of people. In a technological society, technology itself can be used creatively to help solve the human problems technology causes. Taking these two statements into consideration, the political system and professionals in various fields who deal with social institutions should be aware of the need for the preservation of human values and work toward that end.

70:17.55

TITLE: "Trade Unions, Labor Compensation and Development (1955-1964)"
AUTHOR: Morton Stelcner and Sidney C. Sufrin
PUBLISHER: Rivista Internazionale Di Scienze Economiche E Commerciali, Vol. 17, No. 2, February 1970, pp. 133-180.
KEY WORDS: Adjustments; Macro, Unions, Less Developed Countries, Government; Public Policy (Economic Growth, Public Representation in Bargaining); Empirical (Regression, Sample); Abstract.

ABSTRACT: Scope and Level — A theoretical discussion of some general themes of trade unionism in developing societies and an empirical analysis of the impact of unionism on labor's direct and indirect earnings and on the "fragility" or "brittleness" of the underdeveloped nations. Methodology — The analysis attempts to explain variations in direct labor compensation (i.e. benefits which accrue directly to the industrialized labor force) and indirect labor compensation in terms of a number of economic and non-economic considerations. Regression analysis was employed using cross-section and time-series data.

Major Conclusions — Trade unions are one of the few organized and mobilized forces in developing societies. They help to provide political legitimation for the government, to educate their members on strategies of politics and economic control relating to labor matters and attempt to induce the government to be concerned with reducing the frustrations and tensions inherent in economic development. The goals and behavior of the government must therefore be taken into account by the union movement in order to balance increased demands for short-term consumption versus long-term investment and economic growth. Since the government is the indirect mechanism for providing "urban-oriented" expenditures, the point of union pressures is on government. Thus, the economics of underdevelopment necessitates that trade unions center their demands for higher labor compensation - both wage income and urban labor oriented expenditures — directly upon government.

The dependent variables used in the analysis are direct labor compensation (DLC) and indirect labor compensation (ILC). The independent variables include per capita growth in real GNP, labor productivity, the ratio of capital formation to GNP, the degree of unionization, an index of labor protest and type of political system. The last two considerations are indicators of the type and effectiveness of political bargaining mechanisms linking labor organizations and government.

The cross-section analysis suggests that the "index of labor protest" and the "type of political system" are important considerations in explaining inter-country variations in the two types of labor compensations. Generally, in "fluid" political systems labor protest has a greater impact on DLC than on ILC, while in "brittle" systems the relationship is stronger between labor protest and ILC than between labor protest and DLC. Although the models which have been suggested are crude, the fragmentary empirical results do suggest that different patterns of trade union-government relations can be fruitfully investigated through empirical analysis.

70:17.60

TITLE: "Manufacturing Wage Behavior with Special Reference to the Period 1962-1966"
AUTHOR: Wayne Vroman
PUBLISHER: Review of Economics and Statistics, Vol.52, No.2, May 1970, pp.160-167.
KEY WORDS: Adjustments; Macro, Manufacturing, Wage Effects; Empirical (Regression, Sample); Footnotes (Moderate), Bibliography (Medium); No Abstract.

70:17.85

TITLE: "Some Manpower Implications"
AUTHOR: Edgar Weinberg
PUBLISHER: Chapter 8 in Automation Management: The Social Perspective, Athens, Georgia, The Center for the Study of Automation and Society, 1970.
KEY WORDS: Adjustments; Historical, General Equilibrium, White Collar, Employment, Blacks; Private Policy (Advance Notification, Attrition, Job Security, Retraining), Public Policy (Manpower Programs, Community Cooperation, Education); Empirical (Tables), Descriptive (Ongoing Trends, Future Trends); Footnotes (None), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A general equilibrium view of the impact of automation on the economic system. This includes a view of the past trends as well as prognostications for the future. Methodology — The description of what future trends will be is partially dependent on a presentation of present trends. Several charts are offered to demonstrate such things as growth in labor's compensation and growth of output in selected industries. Major Conclusion — Some of the main conclusions of this paper are that: (1) the pace of technological change is quickening; (2) increased technology is not in and of itself responsible for creating massive unemployment; (3) any unemployment that is created by technological change can be offset by increasing levels of demand; (4) several "shock absorbers" such as advance notification, attrition, job security, training and community cooperation can be implemented to buffer the impact of technological displacement.

Among major policy recommendations is a plea for more formal education at all levels so that society will be ensured of having a sufficient pool of trained technicians to cope with a more technologically advanced society.

70:17.90

TITLE: "Education in Production"
AUTHOR: F. Welch
PUBLISHER: *Journal of Political Economy*, Vol. 78, No. 1, January-February 1970, pp. 35-59.
KEY WORDS: Adjustments; Micro, Agriculture, Education Requirements; Public Policy (Information, Education); Theoretical Model, Empirical (Regression, Sample); Footnotes (Few), Bibliography (Medium); Abstract.

ABSTRACT: Scope and Level — The article investigates reasons for the rates of return to high school and college education remaining constant or increasing rather than decreasing with the large increase in the percent of the population receiving more education. Methodology — The author presents theoretical arguments for the rate of return to education to not decrease and then uses cross section data by state in several regressions to get empirical support for the theoretical arguments. Main Conclusions — Education may allow for faster adjustment to changing conditions and enhance the ability to innovate. A technology gap exists between available technology and that understood, and in use. More educated people can take advantage of available technology that has been used to date and be more productive.

The author presents evidence from the agricultural sector, which is technologically dynamic, that college educated people are more productive. He hypothesizes that this is because they can more quickly evaluate and properly implement new input varieties and because they can better distinguish between systematic and random changes. As further evidenced here, empirical results showed less productivity differentials on an education level basis when extension services are actively providing information to all agricultural decision makers.

70:18.00

TITLE: The Impact of Computers on Organizations
AUTHOR: Thomas L. Whisler
PUBLISHER: New York, Praeger, 1970.
KEY WORDS: Adjustments; Micro, Insurance Industry, Computers, Job Content, Employment, Work Relationships, Skill Requirements, Job Satisfaction, Management Practices; Descriptive (Ongoing Trends, Future Trends); Abstract.

ABSTRACT: Scope and Level — A study of the impact of computers on the organizational structure, decision-making process, job content, and skill requirements in the life insurance industry. Methodology — A descriptive analysis of ongoing and projected trends in employment and job content resulting from computerization. Major Conclusions — Computers shift and consolidate the decision system, alter the organizational structure by decreasing the span of control and creating functional departments, and routinize and narrow the job content at the middle and lower levels.

Computers in the life insurance industry have had their major impact on the organizational structure, the decision making process, the means of control, and the job content in each firm. Under organizational structure there has been a decline in the number of clerks and supervisors, a decrease in the number of levels of organization, and a shift from the same function being performed in several departments to functional departmentation. The decision-making process has become consolidated and less flexible in order to apply it to computers. The primary impact on decision-making has been at the middle and low level in the short run and the top level in the long run. The computer has affected control by increasing the centralization and by increasing control over individual behavior. Job content has become more narrow with a decrease in interpersonal communication and a decrease in skills at the middle level accompanied by an increase in skills at the top level.

70:18.50

TITLE: "Attitudes to Technological Change"
AUTHOR: Bernard Wilson
PUBLISHER: The Labour Gazette, Vol.70, No.9, September 1970, pp.642-644.
KEY WORDS: Adjustments; Macro, Canada, Collective Bargaining, Management Practices, Employment; Public Policy (Full Employment, Urban-Regional Policy, Foreign Trade Policy, Fiscal Policy); Descriptive (Ongoing Trends); Footnotes (None), Bibliography (None); No Abstract.

70:19.00

TITLE: "The Pace of Technological Change and the Factors Affecting It"
AUTHOR: Seymour L. Wolfbein
PUBLISHER: in Simon Marcson, ed., *Automation, Alienation, and Anomie*, New York, Harper and Row, 1970, pp. 53-78.
KEY WORDS: Adjustments; Historical, General Equilibrium, Macro, Micro, Agriculture, Automobile Industry, Oil Industry, Railroad Industry, Banking, Retail Trade Industry, Case Studies, Unskilled Workers, Skilled Workers, Employment, Unemployment, Blue Collar-White Collar, Skill Requirements, Private-Public Relations, Work Relationships, Work Time, Hours of Work, Fringe Benefits, Wage Effects, Labor Mobility; Private Policy (Relocation, Retraining, Attrition, Skill Requirements, Transfer Options), Public Policy (Full Employment, Fiscal Policy, Economic Growth, Education, Information, Manpower Programs, Relocation); Empirical (Cases), Descriptive (Past Trends, Ongoing Trends, Future Trends); Footnotes (Moderate), Bibliography (None); Abstract.
ABSTRACT: *Scope and Level* — Four major areas are covered in this analysis of technological change and automation in the postwar period: an eleven-part classification system of technological change; the pace of technological change; factors in the management decision to automate; and manpower effects of and adjustments to automation. *Methodology* — It is primarily a descriptive analysis relying on several case studies of technological change. *Major Conclusions* — The pace of technological change varies widely among industries, with the rate being more rapid in goods than in the service producing industries, typically. There are some indications that the rate of advance is increasing in recent years although the figures are inadequate to date for a conclusive statement. It is quite possible for the overall productivity index to rise only moderately even though technology is advancing rapidly in major sectors of the economy.

Attrition and layoffs due to automation pose a real threat to the labor force which can be eased by higher levels of economic growth. At the same time, private and public programs to facilitate relocation and retraining are essential.

70:19.50

TITLE: Automation and Women Workers
AGENCY: Women's Bureau. Wage and Labor Standards Administration
PUBLISHER: Washington, U. S. Department of Labor, February 1970.
KEY WORDS: Adjustments; Micro, Women, Skilled Workers, Semi-Skilled Workers, Unskilled Workers, Earnings, Skill Requirements; Private Policy (Retraining, Innovation Timing, Working Conditions, Early Retirement, Shorter Work Week); Empirical; Footnotes (None), Bibliography (Medium); Abstract.

ABSTRACT: Scope and Level — A micro study of various industries concerning the technological impact on job opportunities for women. It discusses relative levels of highly skilled and semi and un-skilled workers. Methodology — An empirical study of the trends in job opportunities for women. Major Conclusion — Although job opportunities for women have increased greatly, it is difficult to relate it all to technological advance. Increased benefits such as better working conditions, higher pay, and more skilled jobs have generally been found. However, fewer unskilled or semiskilled jobs are available.

TITLE: "Technology and the Dispossessed"
AUTHOR: Whitney M. Young, Jr.
PUBLISHER: Chapter 4 in Technological Change and Human Development, Ithaca, New York State School of Industrial and Labor Relations, Cornell University, 1970, pp. 68-80.
KEY WORDS: Adjustments; Macro, Blacks, Unskilled Workers, Distribution of Income, Unemployment; Public Policy (Income Maintenance, Public Employment Programs, Manpower Programs); Empirical (Tables), Descriptive (Ongoing Trends, Future Trends); Footnotes (None), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A descriptive analysis of the problems faced by the dispossessed (minorities) due to technological change. Methodology — The author utilized projections made by various agencies to support his view that blacks will be the most seriously affected group and therefore the most in need of special attention. The reason for this special treatment derives from the fact that blacks make up a disproportionately large share of the unskilled and service type labor force, precisely those job categories most likely to succumb to automation.

Major Conclusions — This increase in technology will not only lead to an accelerated pattern of displacement of lesser skilled workers but it will also alter the existing power structure. As more power, e.g. control over the production system, is funneled into the hands of a new class of "technocrats" the federal government will have to make certain that the knowledge and power of this select group is more equally distributed than would be the case if no intervention took place.

In addition to this more theoretical problem, the federal government will be increasingly called upon to provide employment and income programs to help ensure a more equitable income distribution. Thus, the author calls on the government to consider more thoroughly the New Careers Program, Works Progress Administration type programs and a guaranteed annual income.

69:0.75

TITLE: Technological Change in the Printing Industry - Four Case Studies

AUTHOR: Australia, Department of Labour and National Service

PUBLISHER: Melbourne, Australia, Department of Labour and National Service, 1969.

KEY WORDS: Adjustments; Micro, Australia, Printing Industry, Case Studies, Unions, Management Practices, Employment, Skill Requirements; Private Policy (Retraining, Labor-Management Cooperation); Empirical (Cases); Abstract.

ABSTRACT: Scope and Level — Report on the findings of four case studies conducted by the department of Labour and National Service during 1967 in four selected firms in the printing industry. Methodology — Attention was focused primarily on technological changes that had occurred in these printing firms, particularly in the fields of image preparation and type composition, in the period 1965 to 1967. The studies sought to inquire into matters such as the nature of and reasons for introducing change, the effect of change on trade skills, training requirements and manpower requirements, and the methods used to handle personnel issues arising from technological change. Information was obtained mainly by interviewing management, supervisory staff and union representatives. Questionnaires were also used to obtain additional background information.

Major Conclusions — A wide range of technical changes were reported. Incentive for technical change arose from increased work loads coupled with competitive pressures for consistent high quality at lowest possible costs. Management in all firms emphasized the use of advanced technology to maintain their competitive position.

Employment variations arising from technical change in the four firms broadly reflected trends indicated during previous employment surveys of the printing industry. In particular, the strongest growth was in the lithographic trades. The studies revealed changes in the nature of some trade skills. Some tradesmen were required to place more emphasis on scientific knowledge and precise measurement, while for others increased mechanization had emphasized machine-operating skills. Although there were changes in skill requirements, there was still a need for tradesmen with traditional skills. Technical changes had also required the firms to retrain a number of their tradesmen. This retraining enabled some tradesmen to acquire new skills and helped others to fit into other sections.

To handle personnel issues, firms relied on informal communication methods with employees. There was close consultation with union representatives, ensuring that decisions to introduce new equipment were communicated speedily to employees.

69:0.85

TITLE: "The Effects of an Advance in Technology on Employment in an Industry: A Theoretical Model"

AUTHOR: Lester O Bumas

PUBLISHER: The Engineering Economist, Vol. 14, No. 4, Summer 1969, pp. 215-220.

KEY WORDS: Adjustments; Micro, Labor Demand, Employment; Theoretical Model; Footnotes (None), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A model showing the effects of increases in productivity on the labor demanded in a competitive industry. Methodology — This paper uses mathematical equations for production functions and elasticity to develop an explicit equation for technological elasticity of demand for labor. Major Conclusions — If productivity increases in a competitive industry, then the demand for labor will increase, decrease, or remain constant depending on the relative strength of the increased productivity and the decrease in the product price.

If the product demand function is perfectly elastic and production increases, then the product price will be unchanged, the demand for labor will increase, and total employment for the industry will increase. If the product demand function is perfectly inelastic, then the product price will decrease, the demand for labor will decrease, and the total employment in the industry will decrease. For any product demand function with elasticity between perfect elasticity then the effect on the employment in the industry will depend on the results of a mathematical model developed by the author.

69:2.00

TITLE: "Automation and Mobility: Is the Price too High"
AGENCY: Canada, Department of Labour
PUBLISHER: Labour Gazette, Vol. 69, No. 6, June 1969, pp. 331-332.
KEY WORDS: Adjustments; Case Study, Automobile Industry, United Auto Workers, Canada, Collective Bargaining; Private Policy (S.U.B., Layoff Notification), Public Policy (Relocation); Descriptive (Ongoing Trends); Footnotes (None), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A description of the problem faced by workers as companies relocate to keep up with technology. Methodology — A case study of recent contract agreements between the U.A.W. and the major automobile producers. Special attention is paid to government assistance loans that make mobility less of a problem for the more established auto worker. Major Conclusion — The manufacturer and the government have a moral responsibility to workers faced with relocation and to the communities in which they locate.

The problems of various communities offering tax incentives and other lucrative rewards for firms that locate in their domain was questioned. It was felt that this simply resulted in easier terms for the giant corporations and in addition cost the government millions of dollars in Adjustment Assistance Loans. The government officials also stated that mobility is the way to industrialization and workers must become accustomed to the idea of technical change and mobility.

69:2.50

TITLE: "Fruit and Vegetable Harvest Mechanization, Policy Implications"
AUTHOR: B. F. Cargill and B. E. Rosemiller, eds.
PUBLISHER: Lansing, Michigan State University, 1969.
KEY WORDS: Adjustments; Micro, Agriculture, Farm Workers, Unskilled Workers, Unemployment, Low Skilled Workers; Private Policy (Retraining Working Conditions, Relocation), Public Policy (Unemployment Compensation, Education, Manpower Programs, Relocation, Public Employment Programs, Counseling, Information); Empirical (Tables), Descriptive (Ongoing Trends, Future Trends); Footnotes (None), Bibliography (Large); Abstract.
ABSTRACT: Scope and Level — The final volume in a three volume study of the plight of the farm worker as he is increasingly being supplanted by mechanization. Methodology — An empirical study of the industry with particular emphasis on the impact of technological progress. Heavy reliance is placed on statistics to demonstrate the decreasing need for unskilled labor to harvest the annual farm production in the United States. Major Conclusions — The findings of this study demonstrate an urgent need for new policies, especially in the public sector, to deal with displaced farm workers. Numerous recommendations are made, most of which deal with (1) retraining, (2) adult education programs, (3) counseling for displaced workers, (4) creation of public employment, (5) extension of unemployment benefits, and (6) encouraging manufacturing firms to locate in rural areas to help employ the displaced workers.

The authors feel that technological change has progressed so swiftly in the farm sector that the agricultural workers have been overcome with the rapidity of change. In addition, the old notion of farm workers progressing from harvester to small farm owner must be reexamined in light of the increasing difficulty with which such a transition can be accomplished.

69:4.00

TITLE: "An Innovation and Its Diffusion: the New Draperies"
AUTHOR: D. C. Coleman
PUBLISHER: Economic History Review, 2d Series, Vol. 22, No. 3, December 1969, pp. 417-429.
KEY WORDS: Adjustments; Historical, Textile Industry, 16th and 17th Century, Case Study, Europe, Labor Mobility; Descriptive (Past Trends); Footnotes (Moderate), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A discussion of changes in fabric manufacturers and demands in 16th and 17th century Europe. Methodology — A descriptive historical analysis of causes of innovations in fabric demands and supply and motivations for necessary influx of migrants. Major Conclusion — Technological change due to need for substitute factors, changing supply of wool, skills of migrants, change in consumer mix, and changing fashions.

The changes in the type of fabric were caused by: (1) new manufacturing centers less bound by tradition, (2) new consumers in the market with new tastes, (3) geographical changes in the main market, and (4) an influx of new workers with new skills. The migration of workers into the textile manufacturing areas was not motivated as much by economic expectations as by flight from war and religious and racial persecutions.

TITLE: Productivity in Transport: A Study of Employment, Capital, Output, Productivity, and Technical Change
AUTHOR: B. M. Deakin and T. Steward
PUBLISHER: Cambridge, England, Cambridge University Press, 1969.
KEY WORDS: Adjustments; Micro, Transportation Industries, Great Britain, Capital-Labor Ratic , Employment; Empirical (Correlation, Tables, Sample), Descriptive (Ongoing Trends); Footnotes (Moderate), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — This book test for hypotheses relating to out-put, labor productivity, net prices, technological change, and capital stock input in the transport industry of the United Kingdom. Methodology — The authors evaluate all labor inputs with respect to a standard male equivalent labor unit and then correlate different changes in their variables.

Major Conclusions — It is assumed that labor and capital are paid according to their marginal productivities, that technological change is neutral (a shift in the production function leaves the marginal rate of substitution unchanged), and that the marginal product will change as the capital-labor ratio changes.

They found that the main gain in labor productivity was due to technological change. They found a positive correlation between output and labor productivity. Capital deepening was considerably less important as a contributor to labor productivity gain than all other contributory factors combined. All sectors but road haulage have experienced acceleration of total factor productivity gain.

69:5.00

TITLE: Man and the Computer, Technology as an Agent of Social Change
AUTHOR: John Diebold
PUBLISHER: New York, Frederick A. Praeger, 1969.
KEY WORDS: Adjustments; Macro; Private Policy (Retraining), Public Policy (Manpower Programs); Theoretical Discussion; Footnotes (Few), Bibliography (Small); No Abstract.

69:5.50

TITLE: "Education and National Manpower"
PUBLISHER: Business Education Forum, Vol.24, No.2, November 1969.
KEY WORDS: Adjustments; Macro, Education Requirements, Skill Requirements; Private Policy (Job Content), Public Policy (Manpower Programs, Education); Empirical; Footnotes (None), Bibliography (None); No Abstract.

69:6.00

TITLE: "Managing Technology: The Challenge of the Seventies"
AUTHOR: Roy Fenstermaker
PUBLISHER: Management Review, Vol.58, No.4, April 1969, pp.34-45.
KEY WORDS: Adjustments; Macro, Management Practices, White Collar Workers; Private Policy (Retraining); Descriptive (Ongoing Trends, Future Trends); Footnotes (None), Bibliography (None); No Abstract.

69:6.50

TITLE: Technological Man: The Myth and the Reality
AUTHOR: Victor C. Ferkiss
PUBLISHER: New York, George Braziller, 1969.
KEY WORDS: Adjustments; Historical, Employment, Unemployment, Skill Requirements, Leisure, Sociological and Psychological Effects; Public Policy (Planning, Education); Review of the Literature, Descriptive (Past Trends, Ongoing Trends, Futurist Views); Footnotes (Many), Bibliography (Large); Abstract.

ABSTRACT: Scope and Level — An examination of technological man, how he is perceived at present and plausible expectations of what he will be in the future. Methodology — To grasp an understanding of the reality of technological man, the author explores topics such as technology and industrial man, the machine and its critics, technological change and economic inertia, technology and the rediscovery of politics, technological change and the cultural lag, and the creation of technological man. Major Conclusions — The author concludes that, at present, technological man is more myth than reality. Bourgeois man is still in command of things but is increasingly unable to cope with his problems. Thus, the race's only salvation is the creation of technological man.

Technological man must internalize what the author calls the three principles or ideas of the new naturalism, the new holism, and the new immanentism if he is to survive the existential revolution now underway. That is, he must realize that man is part of nature; that the universe is a moving equilibrium of which man is a part. He must also come to the realization of how interconnected everything is. Also, the new immanentism, that this whole interrelated system is determined not from outside but from within, must be accepted. If these principles form the basis of his philosophy, technological man will discover techniques and construct guidelines for dealing with the problems created for humanity.

Continuity of social and cultural institutions and process is necessary to preserve continuity of the species. Some control of technological development is necessary to ensure such continuity. Control of research and development, population, conservation of natural resources, and biogenetic policy are all interrelated and mandatory. Through the rational exercise of these controls technological man will be his own master.

69:7.00

TITLE: The Dilemma of Freight Transport Regulation
AUTHOR: Ann F. Friedlaender
PUBLISHER: Washington, Brookings Institution, 1969
KEY WORDS: Adjustments; Micro, Transportation Industries, Railroad Industry, Older Workers, Skill Requirements, Unions, Work Rules, Interstate Commerce Commission; Theoretical Discussion, Empirical; Footnotes (None), Bibliography (None); No Abstract.

69:8.00

TITLE: "How Mechanization of Harvesting is Affecting Jobs"
AUTHOR: Lawrence J. Fulco
PUBLISHER: Monthly Labor Review, Vol. 92, March 1969, pp. 26-32.
KEY WORDS: Adjustments; Macro, Micro, Agriculture, Farm Workers, Employment, Unemployment, Labor Mobility, Skill Requirements, Wage Effects, Unions, Low Skilled Workers; Private Policy (Retraining, Pay Incentives), Public Policy (Vocational Education, Manpower Programs, Relocation); Empirical (Tables, Cases), Descriptive (Ongoing Trends, Future Trends); Footnotes (Few), Bibliography (None); Abstract.
ABSTRACT: Scope and Level — A description of the effects of mechanization of harvesting on employment, training, and labor-management relations of farm workers. Methodology — Current technological developments for harvesting certain crops are described and the consequences of these and similar innovations are discussed. Major Conclusion — Mechanization of harvesting will necessitate a change in farm labor from picking to trimming and sorting and thus, while there will be an overall decline in the number of jobs, there will also be a need for retraining and more highly skilled workers. Mechanization in harvesting will reduce the need for seasonal, often migratory, labor. The prospects for unionization of farm workers are brighter because farm workers will become more highly skilled and their jobs will become increasingly similar to those in industry.

69:8.50

TITLE: Technical Redundancy in a Small Isolated Society, A Case Study of Union-Management-Government Cooperation to Deal with Redundancy among Stevedores in North Sydney, Nova Scotia
AUTHOR: Roy E. George
PUBLISHER: Montreal, Industrial Relations Centre, McGill University, 1969.
KEY WORDS: Adjustments; Historical, Unions, Longshoremen, Government, North Sydney, Nova Scotia, Employment, Unemployment, Labor Mobility; Private Policy (Retraining, Layoff Notification, Counseling), Public Policy (Information, Counseling, Manpower Programs, Planning, Unemployment Compensation); Descriptive (Case Study); Footnotes (Few), Bibliography (None); No Abstract.

69:9.00

TITLE: "Capitalism and Technological Adaptation in Latin America"
AUTHOR: Wendell Gordon
PUBLISHER: *Journal of Economic Issues*, Vol.3, No.1, March 1969, pp.66-86.
KEY WORDS: Adjustments; Macro, Latin America, Employment; Public Policy (Fiscal Policy, Public Employment Programs, Planning); Descriptive (Ongoing Trends, Future Trends); Footnotes (Few), Bibliography (None); No Abstract.

69:9.50

TITLE: "Grospiron Wants to Extend Automation Talks"
PUBLISHER: Oil and Gas Journal, Vol. 67, No. 27, July 7, 1969, p. 97.
KEY WORDS: Adjustments; Micro, Oil Industry, Unions, Collective Bargaining; Private Policy (Advance Notification); Theoretical Discussion, Descriptive (Ongoing Trends); Footnotes (None), Bibliography (None); Abstract.
ABSTRACT: Scope and Level — This short article covers a speech made by A. F. Grospiron in 1969, where he outlined some of the trouble areas ahead for union-management relations. Major Conclusions — The two most pressing problems are: (1) the industries penchance for taking advantage of automation by upgrading a large segment of the work force to the managerial level, thereby reducing the percentage of workers who are union represented, and, (2) the absolute necessity of providing early information on probable displacement derived from automation.

69:10.00

TITLE: Collective Bargaining and Productivity, The Longshore Mechanization Agreement
AUTHOR: Paul T. Hartman
PUBLISHER: Berkeley, University of California Press, 1969.
KEY WORDS: Adjustments; Historical, Micro, Case Study, Occupational Structure, Longshoremen, Collective Bargaining, Union-Management Powers, Unions, Work Rules, Earnings, Skill Requirements, Wage Effects; Private Policy (Work Rules, Pension Rights, S.U.B., Innovation Type); Empirical (Tables, Case), Descriptive (Past Trends, Ongoing Trends, Future Trends); Footnotes (Few), Bibliography (Large); Abstract.

ABSTRACT: Scope and Level — A study of the 1960 mechanization and modernization agreement between the pacific maritime association and the International Longshoremens and Warehousemens Union. Methodology — The author first gives a historical description of the maritime industry and the Longshoreman's union and then details the union's acquisition of job control. The mechanization and modernization agreement is described and productivity change and the effects of productivity change resulting from the agreement are analyzed. Major Conclusion — There was a very substantial annual savings to the industry as the result of the elimation of restrictive work practices. The union members were also better off, their numbers remaining virtually constant and their work transformed from casual and hard physical labor, at average wage rates but below average earnings, to partially mechanized work, with a substantial proportion of it skilled, and at high wages and higher earnings.

The 1960 agreement between the PMA and the ILWU was referred to as the Mechanization and Modernization Act. Mechanization referred to the adoption of new machines and new techniques of cargo handling. Modernization referred to the elimination of "obsolete" work rules and practices.

69:10.25

TITLE: "Employment and Training Problems in New Factories: A Study on the Recruitment and Training of Labour in Newly Established Plants Using Advanced Technology"

AGENCY: International Labour Office, CIRF Monograph No. 3

PUBLISHER: Geneva, International Labour Office, CIRF Publications, 1969.

KEY WORDS: Adjustments; Macro, Belgium, Czechoslovakia, Germany, Luxembourg, Poland, Great Britain, U.S.S.R., Case Study, Employment, Skill Requirements; Private Policy (Transfer Options, Retraining, Planning); Review of the Literature, Empirical (Tables), Descriptive (Ongoing Trends); Footnotes (None), Bibliography (Medium); Abstract.

ABSTRACT: Scope and Level — A case study conducted by the automation unit of the Research and Planning Department of the International Labour Office, which was initiated so that a better understanding of the recruitment and training of labor in newly established plants using advanced technology could be gained. Methodology — After reviewing the literature on this subject, the author presented and discussed the statistical results of the sample survey which was conducted in seven European countries. Major Conclusions — The major conclusion to be drawn from this rather exhaustive piece of research is that the major problems created by automation were not so severe in the newer, and usually wealthier, firms that were under investigation, but rather in the smaller, neighboring firms from which these new firms "poached" many of their employees. The main recommendation that follows this is that a further study of the secondary impact on other plants and in other industries could prove useful for the final determination of the true effects of automation.

69:10.40

TITLE: "Old Before Its Time: Collective Bargaining at 28"
AUTHOR: Paul Jacobs
PUBLISHER: in Max S. Wortman, ed., *Critical Issues in Labor*, New York, The MacMillan Company, 1969.
KEY WORDS: Adjustments; Historical, Unions, Strike Effectiveness, Collective Bargaining; Private Policy (Retraining, Relocation); Descriptive (Ongoing Trends); Footnotes (None), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A discussion of the effects of automation on collective bargaining. Methodology — This is an analysis of the effects of automation and a suggestion of future techniques for unions.

Major Conclusions — Automation has made collective bargaining less effectual since neither management nor unions can be expected to incur the full costs of relocation and retraining. The cold war has further limited the power of collective bargaining by limiting strikes in military industries. Unions must turn to political techniques to achieve their goals.

69:10.50

TITLE: "Decasualizing a Labor Market: The Longshore Experience"
AUTHOR: Vernon H. Jensen
PUBLISHER: In J. Siegel, ed., The Impact of Computers on Collective Bargaining, Cambridge, Massachusetts, MIT Press, 1969.
KEY WORDS: Adjustments; Micro, Shipping Industry, New York, Employment, Work Rules, Labor Mobility; Private Policy (Seniority, G.A.W., Relocation); Descriptive (Ongoing Trends); Footnotes (None), Bibliography (None); No Abstract.

69:12.00

TITLE: "The Characteristics and Work Adjustment of Engineering Technicians"
AUTHOR: Archie Kleangartner
PUBLISHER: California Management Review, Vol.2, No.3, Spring 1969.
KEY WORDS: Adjustments; Macro, Aerospace Industry, Technical Occupations, Employment, Unions, Collective Bargaining; Private Policy (Pension Rights, Retraining); Descriptive (Ongoing Trends); Footnotes (Few), Bibliography (None); No Abstract.

69:13.00

TITLE: "Vocational-Technical Training and Technological Change"
AUTHOR: Richard H. P. Kraft
PUBLISHER: *Educational Technology*, Vol.9, July 1969.
KEY WORDS: Adjustments; Macro, Technical Occupations, Education Requirements, Skill Requirements; Private Policy (Planning, Retraining), Public Policy (Vocational Education, Planning); Descriptive (Past Trends, Ongoing Trends); Footnotes (None), Bibliography (Small); No Abstract.

69:14.00

TITLE: "Adjusting to Technology on the Railroads"
AUTHOR: Morton Levine
PUBLISHER: Monthly Labor Review, Vol. 92, No. 11, November 1969, pp. 36-42.

KEY WORDS: Adjustments; Micro, Railroad Industry, Unemployment, Unions, Work Rules, Fringe Benefits, Labor Mobility, Collective Bargaining; Private Policy (Seniority, Relocation, Retraining, Severance Pay, Pension Rights, S.U.B., G.A.W., Layoff Notification, Attrition, Early Retirement, Shorter Work Week, Job Security, Multicraft Union, Work Rules, Advance Notification); Descriptive (Ongoing Trends); Footnotes (Few), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A descriptive analysis of ongoing trends in the railroad industry which pertain to technological displacement and the union's adjustment to technological change. Methodology — Presents a fairly detailed survey of various adjustment techniques written into recent contracts. Techniques such as advanced notices, training, etc., are discussed and analyzed. Several statistics are quoted to demonstrate growth of output and shrinkage of job opportunities on American railroads. Major Conclusions — Due to the impact of automation, the collective-bargaining procedure is producing an increasing array of contract clauses that ensure the smooth adjustment of the existing labor force in the railroad industry to the onslaught of automation. The existing techniques for adjustment to technological change have been relatively successful. As technological changes advance more rapidly and employment decreases further, those parties involved will need to continue their efforts to find successful methods of adjustment.

This article presents a clear, concise view of changes in the collective-bargaining procedures in the industry and also describes in some detail various adjustment techniques such as the following: advanced notices, job security, crew size regulations, transfer rights, training, limitations on subcontracting, displacement allowances, severance or dismissal allowances, unemployment benefits and retirement programs.

69:16.00

TITLE: The Sociological Impact of Mechanization on Coal Miners and Their Families

AUTHOR: Helen M. Lewis, et. al.

PUBLISHER: Johnson City, Tennessee, East Tennessee State University, Coal Mining Research Project, 1969.

KEY WORDS: Adjustments; Micro, Coal Miners, Virginia, Sociological and Psychological Effects, Job Satisfaction, Younger Workers, Older Workers, Job Content; Empirical (Sample, Tables); Footnotes (Few), Bibliography (Moderate); Abstract.

ABSTRACT: Scope and Level — A study of the effects of different levels of technology upon the coal miner, his family, and the community in which he lives. Methodology — Underground observation and interviews with miners and their wives were used to determine the effects of differing technology in mines, from handloading to continuous operation, on social behavior, family relationships, community participation, and attitudes toward mechanization. Major Conclusions — The miner working in the mechanized mine tends to be younger and better educated than those working in the handloading mine. As mechanization increases, there is an associated stability of the work situation. A greater degree of economic security is associated with the mechanized mines.

Mechanized mines require men to work in pairs or groups while handloaders work alone. The mechanized miners tend to like working together while the handloaders prefer to work alone. Thus, the level of technology affects their attitudes toward interdependency.

The workers in mechanized mines, in general, had a more positive attitude toward mechanization than miners in handloading mines. Younger workers felt more positive toward mechanization than older workers.

69:17.00

TITLE: "Biased Technical Change and Factor Shares in United States Manufacturing"

AUTHOR: C. A. Knox Lowell

PUBLISHER: Quarterly Review of Economics and Business, Vol. 9, No. 3, Autumn 1969, pp. 17-33.

KEY WORDS: Adjustments; Micro, Capital-Labor Ratio; Theoretical Model, Empirical (Regression, Sample); Footnotes (Few), Bibliography (Medium); Abstract.

ABSTRACT: Scope and Level — A study of the effects of technological change on the elasticity of substitution, bias toward capital using or labor using changes, and changes in factor shares in nineteen two digit (S.I.C.) industries. Methodology — A C.E.S. production function and theoretical model tested by regression techniques using data from the nineteen industries for 1948-63. Major Conclusions — There is strong evidence for capital-using change in only four industries, textiles, rubber, lumber, stone. There is very weak evidence of capital-using technological changes in three industries with very weak evidence also for twelve industries indicating labor-using technological change. In the four industries showing strong evidence of capital-using technological change, the change had a stabilizing effect on the distribution of factor income.

69:18.00

TITLE: "Socioeconomic Questions Relating to Automation"
AUTHOR: I. Maevskii
PUBLISHER: Problems of Economics, Vol. 12, No. 6, October 1969, pp. 3-26.
KEY WORDS: Adjustments; General Equilibrium, U.S.S.R., Employment, Skill Requirements, Wage Effects, Hours of Work, Education Requirements; Public Policy (Urban-Regional Policy, Manpower Programs, Relocation, Shorter Work Week, Planning); Descriptive (Ongoing Trends); Footnotes (Few), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A discussion of technological progress and its effects in capitalist vs. socialist economies. Methodology — The extent of technical development in several capitalist countries is described along with the effects of this progress; unemployment being the primary effect. This is followed by a discussion of technological progress in the U.S.S.R. and the need for planning in the areas of retraining and relocation to get workers, who have been discharged because of progress in automation, into another job in their specialty or into another occupation. Major Conclusion — In the U.S.S.R., the process of releasing workers as a result of automation does not lead to unemployment as it does in the capitalist countries. It does present a need, however, for a special nationwide organ that would concern itself with the planned distribution and utilization of manpower resources on an all-union, republic, and regional scale.

69:19.00

TITLE: "Questions Pertaining to the Redistribution of Labor Resources"
AUTHOR: A. Maikov
PUBLISHER: Problems of Economics, Vol. 12, No. 1, May 1969, pp. 33-44.
KEY WORDS: Adjustments; Macro, U.S.S.R., Employment; Public Policy (Manpower Programs, Relocation, Legislation, Planning); Descriptive (Ongoing Trends, Future Trends); Footnotes (None), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — Labor resources in the U.S.S.R. are distributed unevenly and there is a need for scientific studies to determine labor needs in various industries and geographic areas and to transfer labor to fill these needs. Methodology — Reasons for shifts in manpower needs are discussed and example of industries where particularly large shifts are occuring are given. Major Conclusion — Planning for the redistribution and retraining of workers is a major national task. This work must be effectivelyorganized on the basis of serious scientific research and of active participation by planning organs, ministries and departments, and social organizations.

69:20.00

TITLE: "Scheduling and Seniority: The United Air Lines Experience"
AUTHOR: Charles Mason
PUBLISHER: In Abraham Siegel, ed., The Impact of Computers on Collective Bargaining, Cambridge, Mass., The MIT Press, 1969.
KEY WORDS: Adjustments; Micro, Airline Industry, Employment, Collective Bargaining, Job Satisfaction; Descriptive (Ongoing Trends); Footnotes (Few), Bibliography (None); No Abstract.

69:21.00

TITLE: Technology and the Worker: Technical Demands and Social Processes in Industry

AUTHOR: Martin Meissner

PUBLISHER: San Francisco, Chandler Publishing Co., 1969.

KEY WORDS: Adjustments; Micro, Case Study, Work Relationships, Job Satisfaction; Review of the Literature, Empirical (Tables, Correlation, Cases); Footnotes (Moderate), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A study of the variations in the technical conditions of work and of the differences in worker behavior associated with those variations. Methodology — Case studies are used and categorized into five types of work, handling, hand work, machine work, machine line, and automation. Worker cooperation and influence on one another, and worker communication are then assessed for each level of technology. Several other studies relating to technical restraints on workers are reviewed. Major Conclusion — Work at the technically undeveloped, almost preindustrial level (handling, manual movement of heavy materials) and at the most advanced and perhaps postindustrial level (automation) appear to permit the widest range of choices when it comes to the integration of voluntary and necessary cooperation and communicative acts. At the intermediate levels, where human performance is a partial stopgap in the man-machine mixture, behavior is most constrained.

In order to improve industrial life, this research concludes that it is necessary to change the technical make-up of the plant which imposes necessary restraints on behavior, rather than trying to adapt workers to existing circumstances which allow little choice.

69:22.00

TITLE: "Social Costs of the Scientific-Technical Revolution under Capitalism"
AUTHOR: G. Melechanik
PUBLISHER: Problems of Economics, Vol. 12, No. 8, December 1969, pp. 3-22.
KEY WORDS: Adjustments; Macro, Capitalism, Socialism, Government, Social Costs; Public Policy (Planning, Nationalization); Descriptive (Ongoing Trends); Footnotes (Many), Bibliography (None); Abstract.
ABSTRACT: Scope and Level — A discussion of the failure of capitalism to deal with the social costs resulting from technological change. Methodology — A discussion of the social relations inherent in capitalism which lead to undesirable consequences resulting from technological advances. Major Conclusion — Science has become militarized to a great degree in the U.S. and much of Western Europe. Monopolies, with the aid of government contracts, have exploited scientific progress for their own monetary gain. This has resulted in gross inefficiencies at the taxpayers expense. Many scientists have become businessmen and/or motivated by the desire for money and prestige rather than by pure intellectual pursuit. Without necessary planning, scientific and technical developments have imposed social costs, such as pollution, for which those making the profits do not pay the price.

Planning is needed to perceive costs of technological change and to effectively eliminate negative consequences. This all-inclusive planning is impossible under the present industrial - military - scientific complex. Socialism, alone, is capable of putting the advances of modern science and technology in the service of all mankind.

69:23.00

TITLE: Technological Advance in an Expanding Economy: Its Impact on a Cross-Section of the Labor Force
AUTHOR: Eva Mueller, et. al.
PUBLISHER: Ann Arbor, Institute for Social Research, University of Michigan, 1969.
KEY WORDS: Adjustments; Macro, Employment, Unemployment, Skill Requirements, Job Satisfaction, Education Requirements, Work Rules, Work Relationships, Earnings; Private Policy (Retraining, Job Content, Skill Requirements, Innovation Timing, Planning, Shorter Work Week, Pay Incentives, Fringe Benefits, Seniority, Labor Mobility, Job Security), Public Policy (Education, Vocational Education); Empirical (Regression, Correlation, Sample, Tables); Footnotes (Few), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — An empirical attempt to assess the impact of technological change on a cross-section of the U.S. labor force. It deals with (1) the economic impact of machine change on the work force in terms of income change, promotion, and the steadiness of employment, (2) the relevance of machine change on job satisfaction and content, and (3) the relation of machine change to education and training. Methodology — An empirical study, based on a 1967 survey of a sample of 2,662 labor force participants from all sections of the U.S. who worked in all kinds of industries and occupations, to determine the effects of technological change. Major Conclusions — Workers in the U.S. overwhelmingly like working with machines. Only a small percentage of those interviewed were unemployed or worked shorter hours because of changing technology. Machine change raises the chance of income increases for most groups of workers.

In analyzing job satisfaction the authors found that more demanding jobs mean increased job satisfaction. Equipment change seems to raise the challenge of a job much more often than it reduces it. All major socioeconomic groups responded the same to increased challenge and job satisfaction, not only the young or white collar workers.

There is a difference in attitude toward and use of machines by low skilled and high skilled workers; low skilled workers use machines less and are not as likely to view machination as a good thing. Workers on automated equipment are twice as likely to think automation is good.

The more education a worker has the better he will adjust to technological change and the more chance he has to be in a job in which he will experience change. Specific, on-the-job training seems to prepare workers better for new jobs than general vocational education does, but higher levels of formal education make a worker, in general, more adaptable to new technology.

Occupation was the most important determinant of adjustment to technological change. The old, unskilled and low income workers make the poorest adjustment.

Machine changes did not tend to increase unemployment because companies often order machines when business increases, thus though the new machines generally need fewer workers, the increase in output demanded requires an offsetting increase in the number of workers. What unemployment that does occur tends to trickle down to the most marginal groups in the labor force.

For future study the authors suggest using a larger sample and replicating the survey in a period when the economy is more stagnant than it was from 1962 to 1967. They also suggest interviewing workers who have left the labor force to determine the relationship between advancing technology and withdrawal.

69:23.50

TITLE: "Family-Operated Farms: Their Compatibility with Technological Advance"
AUTHOR: Radoje Nikolitch
PUBLISHER: American Journal of Agricultural Economics, Vol. 51, No. 3, August 1969, pp. 530-545.
KEY WORDS: Adjustments; Micro, Agriculture, Farm Workers; Public Policy (Information); Empirical (Sample, Tables), Descriptive (Ongoing Trends); Footnotes (Few), Bibliography (Medium); Abstract.

ABSTRACT: Scope and Level — A study of the effect of changes in technology on the family farm and its relationship to the larger-than-family farm. Methodology — The article compares the percentage change (from the 1930's and 1940's to the 1960's) in the number of family farms, their share of the marketing, the number of family workers relative to all farm laborers and the amount of family farm land relative to all farm land.

This article concludes that the family farm is not disappearing in the United States. The family farm is just as prevalent in mechanized areas as in non-mechanized areas. The family farm is becoming larger in area and is requiring greater investment in capital but this additional risk is being offset by government programs and contract farming.

The percentage of family farm workers (76-65%) has not appreciably changed from 1930 to 1967. Thus the advances in technology have not affected the manpower mix between family and hired labor.

69:24.00

TITLE: "Technological Transfer, Labour Absorption, and Economic Development"

AUTHOR: H. Pack and M. Todaro

PUBLISHER: Oxford Economic Papers, Vol. 21, No. 3, November 1969, pp. 395-403

KEY WORDS: Adjustments; Micro, Less Developed Countries, Capital Goods Industries, Capital-Labor Ratio; Empirical (Tables), Descriptive (Ongoing Trends); Footnotes (Moderate), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A discussion of the advantages to less developed countries of developing domestic capital goods industries using older, more labor intense technology. Methodology — A discussion of the positive effects of domestic capital goods industries with the aid of two tables. Major Conclusions — The development of a domestic capital goods production industry would diminish unemployment by providing more labor intense machinery.

More technology has led to more capital intense machinery because of the tight labor market in most developed nations. Less developed countries have the opposite factor limitation; capital is more limited for them. The authors argue for the creation of domestic capital goods industries in less developed countries in which production is geared to their own long-run technological requirements. The advantages to duplicating earlier Western machinery that is more labor intense are as follows: (1) it is more capital saving as compared to importing, (2) if urban unemployment decreases, then it allows the adoption of labor saving techniques at a speed consistent with domestic factor availabilities, (3) it will allow the development of technology along labor intense lines, (4) the machinery can more easily be made to order, (5) using older technology reduces the need for engineers capable of designing new equipment, (6) machinery production is labor intense, and (7) it would avoid the problems associated with purchasing through foreign exchanges.

69:25.00

TITLE: "Automation: Its Impact on Organized Labor"
AUTHOR: Martin M Perline and Kurtis L. Tull
PUBLISHER: Personnel Journal, Vol. 48, No. 5, May 1969, pp. 340-344.
KEY WORDS: Adjustments; Micro, Unions, Skilled Workers, Unskilled Workers, Collective Bargaining, Unemployment, Union Management Powers; Private Policy (Advance Notification, Relocation, Transfer Options, Paygrades, S.U.B., Early Retirement, Job Content, G.A.W., Pay Incentives, Retraining); Theoretical Discussion, Descriptive (Ongoing Trends); Footnotes (Few), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A view of the effects of automation through the eyes of organized labor. Methodology — While much empirical evidence is uncovered, especially existing contract provisions, the authors also speculate on the fact that automation may be increasing the demand for unskilled labor while at the same time diminishing the need for skilled craftsmen. Major Conclusion — The main finding of this work is that collective bargaining is the only viable route available for labor to take as it attempts to ameliorate the problems caused by automation.

The two most significant aspects of this work are: (1) its supposition that the modern automated world may forbode the end of skilled workers and lead to the creation of a multitude of workers who need minimal knowledge to operate machinery, and (2) its compact discussion of existing contract provisions which have been implemented by unions to offset the impact of automation.

69:26.00

TITLE: The Impact of Automation on Individuals and Jobs, A Review of Recent Literature (1956-1967), Vol. II

AUTHOR: Paul Prasow and Fred Massarik

PUBLISHER: Los Angeles, University of California, Institute of Industrial Relations, April 1969.

KEY WORDS: Adjustments; Micro, Older Workers, Younger Workers, Blacks, Women, Management Practices, Skill Requirements, Job Satisfaction, Job Content, Working Conditions, Work Relationships, Work Attitudes; Private Policy (Seniority, Relocation, Retraining, Apprenticeship, Innovation Timing, Labor-Management Cooperation, Planning, Advance Notification, Job Content), Public Policy (Education); Review of the Literature; Footnotes (Many), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A review of the literature (1956-1967) on the impact of automation on individuals and jobs. Methodology — Investigations based on empirical research dealing with automation and its effects are reviewed. Major Conclusions — No general conclusions are possible based on the findings of the reviewed studies. Research seems spotty, conclusions are tentative, and results strongly debated.

Conclusions on the effects of automation and best means of adjustment depend in part on the way in which automation is perceived—evolutionary or revolutionary. Those who consider automation to be evolutionary stress planning, methods of introduction, and psychological preparedness to smooth the transition to new technology. The task of adjustment involves getting people to accept progress.

Proponents of a revolutionary theory, on the other hand, stress the underlying change in basic institutions and values, relationships among men, and attitudes toward work. Economic and political institutions and values are challenged by automation.

Education must change significantly to enable people to adjust to change. Whether it must be broader, more comprehensive, more specialized and/or a combination of these must be investigated further.

69:27.00

TITLE: A Longitudinal Study of Automated and Nonautomated Job Patterns in the Southern California Aerospace Industry, Vol. I

AUTHOR: Paul Prasow and Fred Massarik

PUBLISHER: Los Angeles, University of California, Institute of Industrial Relations, April 1969.

KEY WORDS: Adjustments; Micro, Aerospace Industry, California, Labor-Management, Wage Effects, Blue Collar-White Collar, Skill Requirements, Job Content, Education Requirements, Job Satisfaction, Work Relationships; Private Policy (Retraining, Innovation Timing, Skill Requirements); Empirical (Tables, Sample); Footnotes (Few), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A study of automated and nonautomated job patterns in six companies in the California aerospace industry. Methodology — A sample of employees from six companies was interviewed twice to assess attitudes toward automation and their jobs. The workers were divided into three main groups: those who had (1) automated factory jobs using numerical controlled machine tools, (2) automated office jobs using electronic data processing equipment, and (3) "equivalent" nonautomated jobs in factory and/or office. Interviews with management were also conducted. Major Conclusions — Most employees interviewed did not fear automation nor perceive it as a threat to their jobs. Retraining was used extensively in the aerospace industry and there was little displacement as a result.

Most employers indicated that their first automated job represented a major change for them. Sixty percent of the workers with automated jobs indicated that they like them "very much" or "fairly well" so the change was, on the average, a favorable one to which the worker adequately adjusted. All respondent groups in the second interview session indicated that their level of skill and responsibility had increased.

Interviews with management led the authors to conclude that the pace of automated technology was quite important. A moderate pace of change was preferable and allowed for smooth adjustment. Skills levels are changing and allow for more flexibility in the hiring process. Highly trained people are needed for positions as technicians and specialists but relatively unskilled people can be hired at low levels to be trained on-the-job to work with the new equipment. In general, personnel are seeking higher educational levels to achieve higher skill status, better jobs, and increased pay.

69:23.00

TITLE: "Effects of Automation on Some Areas of Compensation"
AUTHOR: Julius Rezler
PUBLISHER: Personnel Journal, Vol. 48, No. 4, April 1969, pp. 282-285.
KEY WORDS: Adjustments; Macro, Blue Collar, Collective Bargaining, Job Content, Wage Effects; Private Policy (Pay Incentives, Job Content); Theoretical Discussion, Descriptive (Ongoing Trends); Footnotes (Few), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A brief article discussing some rather interesting side-effects of automation; namely, how to determine incentives to increase production and the just amount of remuneration for workers who are in control of automated processes. Methodology — This theoretical treatment, with some reference to programs initiated by firms, of issues such as incentives, job evaluation and proper forms of compensation, touches on a little discussed aspect of automation. With the actual work being done by automated machinery, how do we provide incentives to human workers to increase output? Likewise, does the hourly basis of wage payment retain its validity where the so called blue collar worker is more and more assuming the trappings of a white collar worker. Major Conclusion — The main conclusion is that personnel and industrial relations managers should be prepared to deal with these issues at future collective bargaining negotiations.

69:29.00

TITLE: "A Study of the Impact of Office Automation in the IRS"
AUTHOR: Herman J. Rothberg
PUBLISHER: Monthly Labor Review, Vol. 92, No. 10, October 1969, pp. 26-31.
KEY WORDS: Adjustments; Historical, Micro, Internal Revenue Service, Atlanta, Employment; Private Policy (Relocation, Retraining, Attrition, Advance Notification), Public Policy (Relocation); Descriptive (Past Trends, Future Trends); Footnotes (Few), Bibliography (None); Abstract.
ABSTRACT: Scope and Level — A discussion of the changeover to automatic data processing by the Atlanta Region of the IRS from 1961 to 1968, accomplished without involuntary transfers or separations. Methodology — A description of the manpower planning techniques developed by the IRS to move many people and jobs without any involuntary transfers or separations. Major Conclusion — Office automation can be undertaken on a large scale with minimum adverse impact on manpower. It is necessary to plan ahead and to anticipate problems and needs. Employees should be well informed about the pending changes and should know about options open to them in the new system. Counseling for affected employees should be provided to guide them in facing problems related to retraining and/or relocation.

69:30.00

TITLE: "Functional Specialization and Work Attitudes"
AUTHOR: Jon M. Shepard
PUBLISHER: Industrial Relations, Vol. 8, No. 2, February 1969, pp. 185-194.
KEY WORDS: Adjustments; Historical, Case Studies, Work Relationships, Sociological and Psychological effects, Work Attitudes, Job Satisfaction; Private Policy (Job Content, Job Security, Pay Incentives); Descriptive (Ongoing Trends); Footnotes (Many), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A sociologist looks at the effects of increased specialization on worker satisfaction. Methodology — A statistical and descriptive analysis of worker contentment in several different industries, evaluated according to the degree of job specialization. Major Conclusions — The main finding of this study is that a reduction in job specialization, whether by the creation of new man-machine relationships, as in the case of automation, or the redesign of jobs under mechanized technology, will produce beneficial results for the worker.

In addition to job content, other factors enter into the attitudes of the worker to his job. Variables such as security, opportunity for advancement, wages, social aspects of the job, etc., must also be considered in making American workers more content and productive.

69:30.50

TITLE: "The Social Costs of Automation"
PUBLISHER: Business Week, May 3, 1969, p. 98.
KEY WORDS: Adjustments; Macro; Blue Collar, Minority Group Workers; Private Policy (Seniority), Public Policy (Education, Manpower Programs); Descriptive (Ongoing Trends); Footnotes (None), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — This brief article is a synopsis of the international conference on technological change and human development that was held in Israel in 1969. For a more detailed description of the important (for adjustment purposes) papers given at this conference, see the book, "Technological Change and Human Development."

69:31.00

TITLE: "Manpower Planning for Displaced Workers, Evolution of Private Manpower Planning in Armour's Plant Closing"
AUTHOR: James L. Stern
PUBLISHER: Monthly Labor Review, Vol. 92, No. 12, December 1969, pp. 21-28.
KEY WORDS: Adjustments; Historical, Micro, Armour and Company, Omaha, Nebraska, Employment, Case Study; Private Policy (Advance Notification, Relocation, Retraining, Severance Pay, S.U.B., Labor-Management Cooperation, Counseling, Pension Rights, Layoff Notification), Public Policy (Information, Placement Service, Counseling, Manpower Programs); Descriptive (Past Trends, Ongoing Trends), Empirical (Tables, Case); Footnotes (Few), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A discussion of the efforts to ameliorate the plight of workers affected by Armour plant closures, with particular reference to Omaha. Methodology — A description of extensive adjustment methods used in Omaha, including preshutdown planning and continuing education, contractual benefits, and job placement and training, and a discussion of the effectiveness of these techniques. Major Conclusion — An essential prerequisite for a successful manpower adjustment program is a tight labor market including both a low unemployment rate and an expanding number of job opportunities. Job information services and placement and counseling efforts in a tight labor market situation may represent the most efficient tool for handling the adjustment of many workers.

Preshutdown planning is vital to the success of a manpower adjustment program. Continuing education programs can be arranged; workers have time to retrain for other jobs; and, manpower agencies are able to inventory the skills and desires of the workers to be terminated and the alternatives and opportunities the community can offer. In general, preshutdown planning enables the adjustment to be made as efficient and humane as possible.

69:33.00

TITLE: "Helping Workers Locate Jobs Following a Plant Shutdown"
AUTHOR: Joseph C. Ullman
PUBLISHER: Monthly Labor Review, Vol. 92, No. 4, April 1969, pp. 35-40.
KEY WORDS: Adjustments; Micro, Armour and Company, Peoria, Illinois, Case Study, Employment, Labor Mobility; Private Policy (Relocation, Retraining, Transfer Options, Automation Fund, Layoff Notification, Early Retirement, Counseling), Public Policy (Education); Descriptive (Ongoing Trends); Footnotes (Few), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A discussion of the ways in which the Armour Company's Automation Fund Committee (AFC) handled the displacement of workers caused by the closure of a slaughtering and processing plant in Peoria, Illinois. Methodology — Methods for helping workers find new jobs are described. Major Conclusion — Group counseling proved very effective for helping people adapt their employment expectations to the reality of the existing labor market and their individual qualifications. Education and training programs, with the cooperation of the public school system, were effectively utilized by the displaced workers.

The state of the labor market has a crucial effect on the outcome of programs for transfer, retraining and placement. Advance notice of a plant closure is very helpful for workers and those who help them adjust because it gives the necessary planning time. An early retirement provision for older workers allows them an easier adjustment. Varied methods for aiding people in adjusting to displacement are needed to allow for individual differences in skills, age, background, etc.

69:34.00

TITLE: "Automation: Measuring Its Social Costs"
AGENCY: U. S. Department of Labor
PUBLISHER: Monthly Labor Review, August, 1969, pp. 48-49.
KEY WORDS: Adjustments; Macro, Low Educated; Theoretical Discussion; Footnotes (None); Bibliography (None); Abstract.

ABSTRACT: Scope and Level — This article is a synopsis of a conference held in Jerusalem in 1969 under the auspices of private and public institutions in the United States, Britain and Israel. The International Conference on Technological Change and Human Development discussed various sociological and economic problems caused by automation. For the full proceedings of the conference see the publication entitled "Technological Change and Human Development" published by Cornell University, for the American Foundation on Automation and Employment.

69:35.00

TITLE: "Exploring Restrictive Building Practices"
AGENCY: U. S. Department of Labor
PUBLISHER: Monthly Labor Review, Vol. 92, No. 6, July 1969, pp. 31-39.
KEY WORDS: Adjustments; Historical, Construction Industry, Employment, Work Rules, Job Security; Private Policy (Retraining, Job Security, Apprenticeship), Public Policy (Public Representation in Bargaining, Legislation); Descriptive (Ongoing Trends, Future Trends); Footnotes (Few), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — An examination of technical change in building practices in the home construction industry. Methodology — A discussion of some restrictive building practices arising from technological development and the rationale for these practices from the union. Major Conclusion — Restrictive practices often can be justified on the basis of safety and must be considered in relation to the particular industry in which they're being practiced. However, it is necessary to promote home construction and, while legislation or government intervention is too harsh a measure, union leaders and builders should cooperate to minimize restrictive practices and ensure efficiency.

68:0.50

C

TITLE: "Management and Automation Research Project"
AUTHOR: E. H. Burack and T. J. McNichols
PUBLISHER: Chicago, Illinois Institute of Technology, February 1968.
KEY WORDS: Adjustments; Macro, Case Study, Labor-Management, Employment, Skill Requirements; Private Policy (Relocation, Retraining, Job Content, Pay Incentives, Public Policy (Manpower Programs, Education); Descriptive (Ongoing Trends); Footnotes (None), Bibliography (Medium); Abstract.

ABSTRACT: Scope and Level — A macro approach concentrating on management shifts in employment skills in nine major industrial classifications. Methodology — A descriptive discussion of mainly private sector responses to the requirement of complex problem-solving skills. The study is based on a cross sectional managerial interview concerning credentials, structural shifts, technical support groups, firm size, and inter-industry differences in employment. Major Conclusions — (1) The impact of technological demands are significant upon older experienced supervisors as well as the younger technical graduates; (2) maintaining clear job selection criteria and job design will lessen the impact of management obsolescence while practically meeting the need of a closer relationship between policy makers and policy interpreters, and (3) choice of managerial modification is dependent upon industry patterns and differences, where economic size, technical achievement, company policy and management attitudes contribute to employing internal retraining or a hiring of outside technical expertise.

Private policy should broaden incentives toward personal and group development through increased promotional paths, tuition reimbursement programs and salary incentives. Management dependence upon small organizational size and specialized technical employment is at best a short-run hedge against obsolescence. Increasing consolidation demands more responsive management manpower awareness through specific training programs to be tied to on-the-job experiences.

Public policy needs to be directed to the availability of technical advanced training within reasonable distance. University programs should be utilized to provide the advanced technical refreshment necessary to prevent management's vital manpower pool from becoming obsolete.

68:0.75

TITLE: "Business Management and Technical Change: Co-ordinating Technical and Manpower Planning"
PUBLISHER: The OECD Observer, No. 3, April 1968, pp. 12-14.
KEY WORDS: Adjustments; Macro, Case Studies, Sweden, Steel Industry, Labor-Management; Private Policy (Seniority, Transfer Options, Planning Relocation), Public Policy (Manpower Programs, Planning, Placement Service); Descriptive (Ongoing Trends); Footnotes (None), Bibliography (None), Abstract.

ABSTRACT: Scope and Level — A case study of a Swedish steel company that closed an antiquated plant and simultaneously opened a new one that required a small workforce. Also an OECD report on manpower problems and solutions is discussed. Methodology — A descriptive analysis of the displacement effects of plant closings. Major Conclusions — The main conclusion reached from this and several other OECD studies is that consultation of employees plays an important role in reducing resistance to change. This information feedback transcends the normal manpower training and includes seeing to it that the workers are fully informed of the nature of the change and the reasons for it. The success of this approach depends on whether a long established system of consultation is already in existence. Major policy considerations for manpower programs include: (1) make an inventory of the utilization of existing manpower; (2) examine the main characteristics of the various enterprises; (3) examine the labor market and its social and economic characteristics; (4) identify the characteristics of the proposed technological change; (5) assess the quantity and quality of the work force after the change; (6) match assessments of changes in supply and demand for labor after the change; and (7) review the techniques available to arrive at the desired objective and the selection of appropriate techniques.

68:1.00

TITLE: "Human Adjustment to Industrial Conversion: A Canadian Experiment"
AUTHOR: John H. G. Crispo
PUBLISHER: in B. C. Roberts, ed. *Industrial Relations: Contemporary Issues*, First World Conference of the International Industrial Relations Association Geneva 4-8 September 1967, London, Macmillan, New York, St. Martin's Press 1968, pp. 234-253.
KEY WORDS: Adjustments; Micro, Macro, Unions, Labor-Management, Government, Canada, Collective Bargaining, Union-Management Powers; Private Policy (Relocation, Retraining, Pension Rights, Labor-Management Cooperation, Innovation Timing, Innovation Type, Advance Notification), Public Policy (Full Employment, Manpower Programs, Relocation, Unemployment Compensation, Planning); Descriptive (Ongoing Trends); Footnotes (Few), Bibliography (None); No Abstract.

68:2.00

TITLE: "Technological Change and Its Effect in Local Union Leadership"
AUTHOR: Steven E. Deutsch
PUBLISHER: in B. C. Roberts, ed. Industrial Relations: Contemporary Issues, First World Congress of the International Industrial Relations Association Geneva, 4-8 Septebmer 1967, London, Macmillan, New York, St. Martin's Press, 1968, pp. 180-194.
KEY WORDS: Adjustments; Unions, Blacks, Collective Bargaining, Union-Management Powers, Working Conditions, Job Content, Wage Effects; Public Policy (Manpower Programs, Relocation, Placement, Unemployment Compensation, Public Representation in Bargaining, Legislation); Review of the Literature, Empirical (Tables, Sample); Footnotes (Many), Bibliography (None); Abstract.
ABSTRACT: Scope and Level — A discussion of technological change and its effect on local union leadership. Methodology — Union leaders perception of automation and attitudinal effects of experiences with technological change are examined. Major Conclusions — Union leaders are apprehensive about automation. Three-fifths of those interviewed believe that automation will cause increased unemployment. Those who are confused about the concept of automation are the most apprehensive and cynical.

The perception of automation and its consequences was found to be dependent to a large extent on the experiences the man or his friends had with automation and whether the experiences were positive or negative.

Many leaders interviewed felt there should be some union-management cooperation on the adoption of new technology. Unions in general oppose compulsory arbitration and government restrictions but many leaders support government action which will help cushion the effects of displacement caused by technological change.

68:4.00

TITLE: "Automation and Industrial Society
AUTHOR: William A. Faunce
PUBLISHER: Chapter 2 in Problems of an Industrial Society, New York, McGraw Hill, 1968.
KEY WORDS: Adjustments; Macro, Unskilled Workers, Younger Workers, Blacks, Unemployment, Employment, Leisure; Private Policy (Shorter Work Week), Public Policy (Vocational Education); Theoretical Discussion, Empirical (Tables); Footnotes (Many), Bibliography (None); Abstract.
ABSTRACT: Scope and Level — A macro approach to the effects of automation on such topics as employment, hours of work, and how increased leisure time may cause some difficult sociological adjustment problems for those with lower levels of education. Methodology — Although there is some reliance on empirical evidence to justify the author's ideas on the impact of automation on employment levels etc., there is also some discussion about the social overtones of increased leisure time that relies on various sociological theories. Major Conclusions — The major conclusions reached by this chapter are that the age of automation has not led to the massive layoffs and high levels of unemployment that some had predicted, although unemployment rates among teen-agers may have been increased; and that society should plan for the future in terms of changing job requirements and increased leisure time. Other areas needing further research are the conflict of interest between conservationists and recreationists (which he feels is a result of a complex-industrial society) growing out of a lack of social integration. To what extent new production methods should be controlled if the adjustment problem becomes severe in the future should also be studied.

TITLE: Manpower Planning for Technological Change, Case Studies of Telephone Operators
AUTHOR: Audrey Freedman
PUBLISHER: Bulletin No. 1574, Department of Labor, Washington D.C., U.S. Government Printing Office, 1968.

KEY WORDS: Adjustments; Micro, Case Study, Telephone Industry, Telephone Operators, Labor-Management Cooperation, Employment; Private Policy (Seniority, Relocation, Retraining, Attrition, Planning, Early Retirement, Layoff Notification, Severance Pay, Preferential Hiring), Public Policy (Counseling, Full Employment); Descriptive (Ongoing Trends); Footnotes (Few), Bibliography (Medium); Abstract.

ABSTRACT: Scope and Level — A case study of the employment effects of the introduction of new automated switching equipment in the telephone industry. Methodology — The data for this study was acquired by surveying company officials and officers of the employees union. Documents and data were obtained from company files. Major Conclusions — The main conclusions drawn from this investigation are that advanced planning and cooperation between unions, management, and governmental agencies are fundamental to a smooth introduction of new forms of automation. Since the companies knew several years in advance that they were on the verge of introducing new labor-saving machines, they were able to plan well in advance for the ultimate reduction in force. By closely cooperating with union officials, the transition to automatic telephone switching equipment was carried out with a minimum of displacement.

A major feature of this planning was the development, in advance, of estimates of the number of operators who would be needed after the change, and the number of operators for whom some adjustments would be necessary (retirement, transfer, etc.) A second feature of the program was the ability of the various offices to keep tabs on each others need for replacements, so displaced employees could be transferred between offices.

The basic plan of operation was to add no additional workers, except temporary help, when management began to introduce the new equipment. The intention was to let attrition reduce the work force. In critical times, overtime and loss of vacation was agreed upon by the existing work force, so that it could gradually reduce itself to the required level after the new equipment was installed.

If attrition could not lower the work force to the required level, then the displaced workers were given advanced notice of layoff, were retrained, or were transferred to other plants.

68:5.00

TITLE: "Containerization As A Force For Change On The Waterfront"
AUTHOR: Joseph P. Goldberg
PUBLISHER: Monthly Labor Review, Vol. 91, No. 1, January 1968, pp. 8-13.
KEY WORDS: Adjustments; Micro, Longshoremen, Shipping Industry, Unskilled Workers, Employment, Skilled Workers, Collective Bargaining, Work Rules; Private Policy (Seniority, Severance Pay, G.A.W., Early Retirement, Pension Rights); Descriptive (Ongoing Trends, Future Trends); Footnotes (Moderate), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A study of the impact of the trend in shipping to containerization of commerce. In addition to the discussion of the impact of containerization on both the east and west coasts, coverage is also given to the various agreements between labor and management which have been implemented to soften the impact of technological change. Methodology — Basically a review of present trends and conditions on the waterfront, this article relies heavily on a review of previously agreed upon contract negotiations for its methodological analysis. Major Conclusion — The major finding of this article is that even though the problems created by containerization are complex, the readiness of both unions and management to enter into discussion of needed changes within the industry is the only workable solution to the long-term problems created by the advent of containerization. This article also provides a largely condensed yet useable history of the various contract negotiations that have been accepted by the longshoremen to offset the employment effects of containerization.

68:6.00

TITLE: Technology and Jobs: Automation in Perspective
AUTHOR: A. J. Jaffe and Joseph Froomkin
PUBLISHER: New York, Fredrick A. Praeger, 1968.

KEY WORDS: Adjustments; General Equilibrium, Younger Workers, Women, Blacks, Older Workers, Low Educated Workers; Public Policy (Manpower Programs, Income Maintenance, Fiscal Policy, Public Employment Programs); Review of the Literature, Empirical (Tables), Descriptive (Ongoing Trends, Projected Trends); Footnotes (Moderate), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A general view of the overall impact of automation on young workers, women, blacks, and undereducated workers. Also discussed is the strategic importance of maintaining high levels of aggregate demand to offset any possible unemployment repercussions from technological change. Methodology — This book contains a series of at times seemingly disconnected parts which begins with a discussion of the historical debate over the effects of automation. By and large, however, the brunt of the book is devoted to tables which demonstrate past trends in productivity, output, employment, etc. Finally, some future trends (normally based on extrapolations from past experiences) are entertained. Major Conclusion — Given the immensity of the data utilized in the study the book is amazingly light on presenting firm conclusions. The main finding is that if any adverse effects of automation should crop up in the employment sector, aggregate demand can be pumped up by various governmental policies to ensure adequate levels of employment.

68:7.00

TITLE: "The Effect of Technological Change on the Structure of British Trade Unions"
AUTHOR: Shirley W. Lerner
PUBLISHER: B. C. Roberts, ed. Industrial Relations: Contemporary Issues, First World Congress of the International Industrial Relations Association Geneva, 4-8 September 1967. London, Macmillan, New York, St. Martin's Press, 1968, pp. 172-179.
KEY WORDS: Adjustments; Micro, Unions, Great Britain, Collective Bargaining, Skill Requirements, Job Content; Private Policy (Retraining, Labor-Management Cooperation, Multicraft Union); Descriptive (Past Trends, Ongoing Trends); Footnotes (Few), Bibliography (None); No Abstract.

68:8.00

TITLE: "Automation in the Office"
AUTHOR: Floyd C. Mann and L. H. Williams
PUBLISHER: in Charles Walker, Technology, Industry, and Man: The Age of Acceleration, New York, McGraw Hill, 1968, pp. 147-158; from "Observations on the Dynamics of a Change to Electronic Data Processing Equipment", Administrative Science Quarterly, Vol. 5, September 1960, pp. 217-256.
KEY WORDS: Adjustments; Micro, Labor-Management, Office Workers, Skill Requirements, Job Satisfaction; Private Policy (Pay Incentives, White Collar Unionization, Job Security, Planning, Retraining, Job Content); Empirical (Cases); Footnotes (Few), Bibliography (None); No Abstract.

68:9.00

TITLE: "Internal Labor Markets, Technological Change, and Labor Force Adjustment"

AGENCY: Manpower Administration, U. S. Department of Labor.

PUBLISHER: Part II in Work Force Adjustments in Private Industry—Their Implications for Manpower Policy, Manpower Automation Research Monograph No. 7, October 1968, pp. 45-130.

KEY WORDS: Adjustments; Micro, Labor-Management, Employment, Unemployment, Skill Requirements, Job Content; Private Policy (Retraining, Pay Incentives, Planning), Public Policy (Manpower Programs, Planning, Education); Theoretical Model, Empirical (Tables, Sample); Footnotes (Moderate), Bibliography (Large), Abstract.

ABSTRACT: Scope and Level — A study of labor force adjustment to technological change in internal labor markets. Methodology — Labor force adjustments to change are examined with an emphasis on recruitment and training. Major Conclusions — If technology is adopted on a gradual, progressive basis there will be people within the plant to act as 'teacher' for others to learn the new skills required. This will facilitate adjustment without unnecessary displacement. Problems are encountered when drastically different technologies, which have been developed a great distance from the plant, are adopted. This diminishes the potential for comprehensive on-the-job training and successful and total adjustment takes much longer to complete.

Formal education to develop literacy, industrial skills and non-skill traits (reliability, punctuality, honesty, etc.) aids adjustment to change. The adjustment process is delayed if workers must be taught to read in order to accept an automated job. Often in-plant education programs only teach a person to "read" those terms which he will directly encounter in his particular job. This may be effective in the short run but will not increase his mobility should further automation be implemented.

68:10.00

TITLE: "Work Force Adjustments in Private Industry—Their Implications for Manpower Policy"

AGENCY: Manpower Administration, U. S. Department of Labor

PUBLISHER: Manpower Automation Research Monograph No. 7, Washington, D.C., U. S. Government Printing Office, 1968.

KEY WORDS: Adjustments; Macro, Manufacturing, Blue Collar Workers, Inflation, Information Flows; Private Policy (Retraining), Public Policy (Manpower Programs, Education); Theoretical Discussion, Descriptive (Ongoing Trends); Footnotes (None), Bibliography (Medium); Abstract.

ABSTRACT: Scope and Level — The main theme of this study is to investigate how differences between skills and abilities of the labor force and the concomitant requirements of blue-collar jobs in manufacturing are reconciled by the firms. Methodology — Basically a descriptive study of programs employed by private and public agencies, with various opinions as to the success of these programs. Major Conclusions — Some of the major conclusions reached by this article are as follows: (1) the concern over the contribution of changing technology to the structural unemployment problem of the 50's and 60's has been largely unwarranted; (2) changing technology does cause imbalances, however, and this in turn leads to inflation, because of a lack of adequately trained workers; (3) the major governmental concern with adjustment processes should be the reduction of their costs; (4) a pooling of information about adjustment techniques through the planning process may be sufficient to hasten the adjustment process and reduce its costs.

Among the recommendations for further research are: (1) a need for identifying the relationship between costs and prices to assess the impact of labor market adjustments upon national economic goals; (2) identification of the distribution of adjustment costs among the various sectors of the economy; (3) information about the interdependence of short-run and long-run instruments of adjustment should be developed; and (4) research should be directed at the relationship between the distribution effect of technological change and the expansion of employment opportunities in the innovating plant.

68:13.00

TITLE: "Technological Change and the Level of Employment in Western Europe"

AUTHOR: Felix Paukert

PUBLISHER: British Journal of Industrial Relations, Vol. 6, No. 2, July 1968, pp. 139-155.

KEY WORDS: Adjustments; General Equilibrium, Western Europe, Employment, Unemployment; Theoretical Model, Empirical (Tables); Footnotes (Few), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A general equilibrium approach to the employment effects of technological change. Methodology — The author utilizes the ICOR (L) model developed initially by Kuznets to measure the correlation between changes in technology to changes in the unemployment rate, using empirical data. Major Conclusions — The main conclusion drawn from this study is that, at least in Western Europe, increases in technology lead to a decrease in the rate of unemployment. This conclusion however, refers to the overall unemployment rate and not to sectoral unemployment rates. The author does feel that employment in particular industries and sectors seems to be adversely affected by technological change within the industry.

The author feels that much more data is needed in this sectoral analysis, and, in fact, in industry breakdowns, before much stronger conclusions can be drawn.

Another important aspect of this article is the fact that it presents a nice summary, by country, of growth rates in various sectors of the economy, such as manufacturing, mining etc., and also the growth rates of labor productivity in these industries.

68:14.00

TITLE: "On-The-Job Training and Adjustment to Technological Change"
AUTHOR: Michael J. Piore
PUBLISHER: Journal of Human Resources, Vol. 3, No. 4, Fall 1968.
KEY WORDS: Adjustments; Macro, Micro, Case Study, Low Skilled Workers, High Skilled Workers, Employment, Unemployment, Blue Collar Workers, Work Relationships, Work Time, Wage Effects, Education Requirements; Private Policy (Seniority, Relocation, Retraining, Job Security, Work Sharing, Labor-Management Cooperation, Layoff Notification, Innovation Timing, Job Content, Skill Requirements), Public Policy (Education, Full Employment, Fiscal Policy); Theoretical Discussion, Empirical (Cases), Descriptive (Ongoing Trends); Footnotes (Moderate), Bibliography (None), Abstract.

ABSTRACT: Scope and Level — An analysis of the role of on-the-job training in adjusting to technological change based on extensive interviews in plants of a large number of manufacturing industries. Emphasis is placed on low skill/high skill inter-relations in the plant. Methodology — Theoretical/descriptive study based on information gleaned from open-ended interviews with engineers, and personnel and industrial relations specialists in 18 manufacturing plants and 11 corporate headquarters in 11 industries. Major Conclusions — Informal on-the-job training which takes place as part of the production process appears to be a much more important source of skills than schools, apprenticeship, the armed forces, or company classroom training for almost all blue-collar manufacturing occupations.

In the absence of technological change, on-the-job training takes place in the process of production; however, when change occurs, it takes place in the process of innovation, installation, and debugging of new equipment, so that training, production, and innovation should be viewed as joint products of a single process.

This joint product, single process relationship can prevent structural imbalance in the labor market, and in addition, suggests new interpretations of labor productivity and job vacancy data.

68:15.00

TITLE: "On Labor's Problems
AUTHOR: A. H. Raskin
PUBLISHER: in Charles F. Madden, ed., Talks With Social Scientists, Carbondale, Illinois, Southern Illinois University Press, 1968, pp. 18-36.
KEY WORDS: Adjustments; Historical, Macro, Micro, General Equilibrium, Age Groups, Racial Groups, Education Requirements, Coal Mining Industry, Automobile Industry, Chemical Industry, Steel Industry, Railroad Industry, Case Studies, Blue Collar Workers, White Collar Workers, Unskilled Workers, Skilled Workers, Employment, Unemployment, Collective Bargaining, Blue Collar-White Collar, Unions, Private-Public Relations, Work Rules, Job Satisfaction, Education; Private Policy (Seniority, Relocation, Severance Pay, Planning, Work Rules, Pension Rights, Attrition, Early Retirement, Labor-Management Cooperation, Shorter Work Week, White Collar Unionization, Job Security), Public Policy (Full Employment, Fiscal Policy, Income Policy, Urban-Regional Policy, Manpower Programs, Relocation, Minimum Wages, Education); Descriptive (Past Trends, Ongoing Trends, Futurist Views); Footnotes (None), Bibliography (None); No Abstract.

68:15.90

TITLE: "An Economic Interpretation of Technological Change Provisions"
AUTHOR: David Phillips Ross
PUBLISHER: Monthly Labor Review, Vol. 91, No. 4, April 1968, pp. 27-30.
KEY WORDS: Adjustments; Macro, Canada, Case Studies, Collective Bargaining; Private Policy (G.A.W., Severance Pay. Layoff Notification, S.U.B., Shorter Work Week, Vacations, Early Retirement, Retraining, Labor-Management Cooperation); Descriptive (Ongoing Trends); Footnotes (None); Bibliography (None); Abstract.

ABSTRACT: Scope and Level — This paper assesses the efficiency of various collective agreement provisions and their effectiveness in providing compensation to displaced workers. Methodology — The empirical data for this study was gained from a survey of 471 recent agreements, on file with the Canada Department of Labor. Only firms with 500 or more employees were scrutinized. Major Conclusion — The most important conclusion established by this paper is that the effectiveness of technological change provisions in their ability to compensate effected workers depends on the industry and the type of displacement manifested in the change.

The paper also discusses the efficiency of various forms of compensation (the most utilized form of compensation is income maintenance), the costs of these programs and the efficiency of establishing joint union-management study committees to help select the most efficient compensation program. The central government is recommended to investigate the possibility of extending these forms of compensation to employees of bankrupt firms which cannot afford to aid their workers.

68:16.00

TITLE: "Distribution of Power Within the ILWU and the ILA"
AUTHOR: Phillip Ross
PUBLISHER: Monthly Labor Review, Vol. 91, No. 1, January 1968, pp. 1-7.
KEY WORDS: Adjustments; Historical, Micro, Longshoremen, Unions, Work Rules; Private Policy (G.A.W.); Review of the Literature, Descriptive (Ongoing Trends); Footnotes (Few), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A historical review of the differences in the approaches of the ILWU and the ILA toward technological change, especially containerization. Major Conclusion — The main conclusion of this article is that the impact of containerization could devastate both the ILA and the ILWU. Given, however, the fact that the transitional period to total containerization is fairly lengthy, both unions, but especially the ILA, have the necessary power to exercise some measure of control over future developments in containerization.

68:17.00

TITLE: "Man, Work, and the Automated Feast"
AUTHOR: Ben B. Seligman
PUBLISHER: The Economics of Dissent, Chicago, Quadrangle Books, pp. 48-65.
KEY WORDS: Adjustments; Historical, Macro, Micro, Automobile Industry, Chemical Industry, Railroad Industry, Steel Industry, Meatpacking Industry, Coal Mining Industry, Agriculture, Banking, Insurance Industry, Public Utilities, Case Studies, Unskilled Workers, Skilled Workers, Blue Collar Workers, White Collar Workers, Employment, Unemployment, Collective Bargaining, Union-Management Powers, Unions, Private-Public Relations, Work Rules, Work Relationships, Work Time, Hours of Work, Fringe Benefits, Wage Effects, Earnings, Labor Mobility, Job Satisfaction; Private Policy (Seniority, Retraining, Relocation, Placement, Shorter Work Week, Unemployment Compensation); Empirical (Cases), Descriptive (Past Trends, Ongoing Trends, Futurist Views); Footnotes (None), Bibliography (None), No Abstract.

68:18.00

TITLE: "Manpower and Technological Change in Czechoslovakia"
AUTHOR: Jack Steiber and Liba Paukert
PUBLISHER: Industrial Relations, Vol. 8, No. 1, October 1968, pp. 91-107.
KEY WORDS: Adjustments; Historical, Macro, Czechoslovakia, Age Groups, Agriculture, Mining, Manufacturing, Construction Industry, Service Industry, Unskilled Workers, Skilled Workers, Semi-Skilled Workers, High Skilled Workers, Employment, Unemployment, Union-Management Powers, Private-Public Relations, Work Rules, Work Relationships, Fringe Benefits, Earnings, Labor Mobility, Education, Occupational Structure, Skill Requirements; Public Policy (Income Maintenance, Manpower Programs, Relocation, Placement Service, Unemployment Compensation, Planning, Education); Review of the Literature, Empirical (Tables, Sample), Descriptive (Past Trends, Ongoing Trends, Future Trends); Footnotes (Many), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A general overview of the Czech economy with emphasis on the adjustment problems and solutions that have been suggested by Czech economists. Methodology — A theoretical discussion of the programs that must be adopted if Czechoslovakia is to cope with the pressing need to adopt new technology. A descriptive analysis is based upon official government and international reports and statistics, as well as numerous related articles and books. Major Conclusions — The main conclusion is that in order to speed up the adoption of modern technology Czechoslovakia will have to move to a ore profit oriented economy. Also needed will be wider income differentials, to encourage workers to gain a greater education, and the permitting of managers to dismiss and transfer workers more easily.

Structural employment problems, mainly due to a lack of skilled maintenance workers, engineers, technicians, and scientists have begun to crop up and they are predicted to worsen before a large scale improvement can be made. These various difficulties caused by automation pose a serious challenge to the Czech economy but the Czech economists are confident that under a new system of management, their economy will be able to make the necessary adjustments to cope with these problems more effectively then the capitalist economies.

Some of the changes in manpower policy incorporated in the New System initiated in 1965 include retraining and relocation allowances, an increased management freedom to dismiss workers, increased frictional unemployment, and educational reform.

68:19.00

TITLE: "Women's Employment in Japan in a Period of Rapid Technological Change"

AUTHOR: Nabuko Takahashi

PUBLISHER: International Labor Review, Vol. 98, No. 6, December 1968, pp. 493-510.

KEY WORDS: Adjustments; Historical, General Equilibrium, Macro, Micro, Japan, Women, Age Groups, Case Study, Occupational Structure, Employment, Unemployment, Collective Bargaining, Union-Management Powers, Blue Collar-White Collar, Work Rules, Work Relationships, Work Time, Hours of Work, Fringe Benefits, Wage Effects, Earnings, Labor Mobility, Job Satisfaction, Education Requirements; Private Policy (Seniority, Relocation, Retraining, Severance Pay, Planning, Layoff Notification, Attrition, Labor-Management Cooperation, Paygrades, Job Security, Skill Requirements, Transfer Options), Public Policy (Economic Growth); Empirical (Tables, Sample, Cases), Descriptive (Past Trends, Ongoing Trends); Footnotes (Moderate), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — An analysis of shifts in women's employment by age, occupation, and industry in Japan from 1955 to 1965, which were, in part, induced by rapid technological change. Methodology — The study is descriptive in nature, and relies heavily on official labor force surveys and reports. Major Conclusions — From 1955 to 1965 technological change occurred at a rapid rate in Japan, resulting in dramatic shifts in the structure of women's employment. This rate of advance took place with little dislocation of labor primarily because of the high rate of economic growth achieved in the period.

Union-management actions also helped mitigate the effects of technological change. Traditional responses to change via collective bargaining included relocation and retraining, severance pay, attrition, and educational programs. In addition, the unique Japanese view of employment as a lifetime guarantee aided in this period.

68:19.25

TITLE: "Organization and Automation Among White-Collar Workers"
AGENCY: U. S. Department of Labor
PUBLISHER: Monthly Labor Review, Vol. 91, No. 2, February 1968, pp. 3-4.
KEY WORDS: Adjustments; Macro, White Collar Workers, United States, Germany, Israel, Blue Collar Workers, Unemployment; Private Policy (White Collar Unionization); Descriptive (Ongoing Trends, Future Trends); Footnotes (None), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — This short article presents a brief synopsis of several papers given at the 15th triennial congress of the International Federation of Commercial, Clerical, and Technical Workers. Major Conclusions — The main conclusions drawn by some of the international participants were: 1) German white-collar workers should shed the illusion that they will eventually become self-employed, which acts as an impediment to their joining a union; 2) white collar unions should stress different types of goals to help entice prospective union members, i.e., emphasize promotions that will flow from training secured by the unions rather than the blue collar method of emphasizing increased wages obtainable by joining a union.

68:19.50

TITLE: "Updating the Middle-Aged"
PUBLISHER: Engineering, Vol. 205, February 1968, p. 279.
KEY WORDS: Adjustments; Macro, Great Britain, Machine Tool Industry, Engineers, Skill Requirements, Private-Public Relations; Private Policy (Retraining), Public Policy (Manpower Programs, Education); Descriptive (Ongoing Trends, Future Trends); Footnotes (None), Bibliography (None); Abstract.
ABSTRACT: Scope and Level — A synopsis of a paper presented in 1968 by the Principal of the University of Manchester Institute of Science and Technology, dealing with the subject of upgrading the educational level of engineers and managers in the English machine tool industry.
Major Conclusions — Training and education in middle life must be planned as part of a career development program. They should not be undertaken only after unemployment strikes or to quickly catch up on the recent development in the field.

68:20.00

TITLE: "Collective Bargaining and the Challenge of Technological Change"
AUTHOR: Arnold R. Weber
PUBLISHER: in Charles Walker, Technology, Industry, and Man, The Age of Acceleration, New York, McGraw-Hill, 1968, pp. 247-260; from John H. G. Crispo, ed., Industrial Relations: Challenges and Responses, Toronto, University of Toronto Press, 1966, pp. 73-90.
KEY WORDS: Adjustments; Micro, Unions, Labor-Management, Collective Bargaining, Union-Management Powers; Private Policy (Severance Pay, S.U.B., Work Rules, Attrition, Early Retirement, Relocation, Retraining, Vacations, Work Sharing, Labor-Management Cooperation); Descriptive (Ongoing Trends); Footnotes (None), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A discussion of collective bargaining and ways in which it is meeting the challenge of technological change. Methodology — Programs for adjustment to technological change resulting from collective bargaining are described. Major Conclusions — Three general programs of adjustment to change have been adopted; the buy-out, gains-sharing, and manpower management. The buy-out approach involves an attempt to compensate the worker for losses imposed by technical change. Severance pay, supplemental unemployment benefits, and special funds to guarantee incomes to displaced workers are examples of the buy-out. Management gains under this system because once its moral responsibility toward the workers has been translated into financial terms it has almost a free hand in increasing efficiency. Unions may also gain because the need to put out huge sums of cash payments to workers in order to automate may slow down the process. It also aids the displaced employee and helps cushion his transition to a new job.

Gain-sharing is a method for distributing the gains from productivity among employees. This also gives management wide latitude in introducing change. Those workers who are not displaced are helped most by this approach while displaced workers are left out. The best known applications of this method are the United Mine Workers and the Kaiser Steel Plan.

The manpower planning approach emphasizes the need for distributing employment opportunities as widely as possible among union members. Examples of this method are attrition, early retirement plans, relocation within or among plants, retraining programs, extended vacations, and general work sharing.

A combination of all three approaches is often employed, with a different emphasis depending on the collective bargaining circumstances. Manpower management allows for the most diversity and is the most successful and equitable plan but also requires the most planning.

Collective bargaining has made a definite positive contribution towards adjustment to technological change and will continue to play an active role in this area.

68:21.00

TITLE: "Technology and Labor in the Textile Industry"
AUTHOR: Rose N. Zeisel
PUBLISHER: Monthly Labor Review, Vol. 91, No. 2, February 1968, pp. 49-55.
KEY WORDS: Adjustments; Micro, Textile Industry, Blacks, Women, Unemployment; Private Policy (Seniority, Layoff Notification), Public Policy (Unemployment Compensation, Placement, Manpower Programs); Descriptive (Past Trends, Projected Trends); Footnotes (Few), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — An historical discussion of the trend to a smaller work force in the textile industry, is followed by the author's prognosis of future employment trends and levels of technology in the industry. Methodology — The author utilizes empirical data to demonstrate capital expenditures, increases in textile shipments, etc. From this data and her projections for technological change in the 70's, she argues that the future will see larger, more automated plants being utilized by industry firms. Major Conclusion — The major conclusion drawn is that the inevitable automation of the simpler tasks in the textile factory will present little promise for employment gains in the industry. The impact will be severe on unskilled workers, especially Blacks. The major policy conclusion drawn is that, since the industry is predominantly non-union, the Federal Government has a major role to play in helping to create unemployment insurance, placement, and retraining programs for the industry.

67:1.00

TITLE: "Manpower Development Programs for Farm People"
AUTHOR: Curtis C. Aller
PUBLISHER: in C. E. Bishop ed., Farm Labor In The United States, New York, Columbia University Press, 1967, pp. 115-135.
KEY WORDS: Adjustments; Historical, Macro, Micro, Age Groups, Agriculture, Unskilled Workers, Skilled Workers, Employment, Unemployment, Skill Requirements, Collective Bargaining, Private-Public Relations, Work Relationships, Earnings, Education Requirements; Public Policy (Full Employment, Monetary Policy, Fiscal Policy, Urban-Regional Policy, Public Employment Program, Information, Counseling, Manpower Programs, Relocation, Placement Service, Minimum Wages, Unemployment Compensation, Public Representation in Bargaining, Legislation, Planning, Education, Immigration Policy); Descriptive (Ongoing Trends); Footnotes (Few), Bibliography (None); No Abstract.

67:1.30

TITLE: Trade Unions and Technological Change
AUTHOR: S. D. Anderman, ed.
PUBLISHER: London, George Allen and Unwin Ltd. 1967
KEY WORDS: Adjustments; Macro, Sweden, Collective Bargaining, Job Satisfaction; Private Policy (Retraining, Job Content, Early Retirement, Shorter Work Week), Public Policy (Manpower Programs, Vocational Education, Education, Income Maintenance, Income Redistribution); Theoretical Discussion, Descriptive (Ongoing Trends, Projected Trends); Footnotes (Few), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A description of present trends in technological change and programs that exist and programs that should be implemented to meet the challenge of change. Methodology — This work, written for the Swedish trade unions, is largely based on the experience of the past, although much space is devoted to theoretical discussions of the effects of automation on job content and the state of the worker in the future if the proper programs are not implemented to lessen the shock of technological displacement. Major Conclusion — The main conclusion is that much work needs to be done in improving job-market information, and the quality of labor exchanges (centralized data banks that computerize job openings and workers available) so that a smoother more humane adjustment can take place as technological displacement occurs.

Also covered is the necessity of developing special programs for the hard to place workers and ensuring that there is no discrimination against women who are forced to seek new employment. It is felt that reeducation can play an important role in helping those effected by technological change to find new jobs.

Major recommendations made are for an in depth study of job satisfaction and for possible solutions to the perplexing problem of how to enrich the production-line type jobs.

67:1.60

TITLE: "Worker Adjustment and Technological Change"
AUTHOR: S. D. Anderman, (ed.)
PUBLISHER: Chapter 9 in Trade Unions and Technological Change, London, George Allen and Unwin Ltd., 1967
KEY WORDS: Adjustments, Sweden, Macro, Job Content, Work Relationships, Unions; Private Policy (Job Content); Descriptive (Ongoing Trends); Footnotes (Few), Bibliography (None); No Abstract.

67:2.00

TITLE: "Human Values and Technology"
AUTHOR: Solomon Barkin
PUBLISHER: Labor Relations and Research Center, University of Massachusetts, Amherst, Reprint Series, No. 10, 1967.
KEY WORDS: Adjustments; Macro, United States, Netherlands, Great Britain, Germany, Canada, Private-Public Relations; Private Policy (Layoff Notification, Severance Pay, Retraining), Public Policy (Manpower Programs, Counseling, Information), Descriptive (Ongoing Trends, Future Trends); Footnotes (None), Bibliography (None); Abstract.
ABSTRACT: Scope and Level — A macro view of the impact of automation on labor-management relations with suggestions as to how best allieviate the impact of automation. Methodology — Basically a descriptive analysis of various programs implemented in the United States, Canada and several European countries. Major Conclusion — The main conclusion drawn from this study is that the achievement of a high rate of economic growth is partially dependent upon establishing a well-balanced manpower program. The goal of this policy should be the fullest possible utilization of existing human resources. Each country therefore needs a constructive and integrated national program that allows for a smooth adjustment to economic and technical change. These programs should be structured around close cooperation between the private and public sectors.

Major recommendations include a call for an integrated-national system in which the enterprise and public services supplement and complement each other. Along this vein the author calls for closer cooperation between the various parties and a reduction of competition between these groups.

67:2.25

TITLE: International Labor
AUTHOR: Solomon Barkin, et. al., eds.
PUBLISHER: New York, Harper & Row, 1967.
KEY WORDS: Adjustments; Macro, Labor-Management, Government, Unions; Public Policy (Manpower Programs); Theoretical Discussion, Descriptive (Ongoing Trends, Projected Trends); Abstract.

ABSTRACT: Scope and Level — The study contains a series of essays on selected themes in the area of international labor problems and industrial relations. Its purpose is to promote interest in further international studies to facilitate both the transfer of experience and the solution of problems. Subject areas discussed are: aspects of the operation of trade unions as institutions; problems of comparative industrial relations; the creation of a common labor market among groups of countries to achieve integrated labor markets and establish free trade areas; the difficulty at the national and international levels of integrating social security systems; and the importance of national manpower administrations for the definition of policy and implementation.

Methodology — The essays deal with problems and institutions which are, geographically speaking, foreign to the U.S. or compare some aspect of U.S. experience to the foreign. Three forms of methodology are used: 1) comparative studies - method of investigation using cross-cultural comparisons to examine statements concerning the relation between environmental variables and dependent variables related to phenomena appearing commonly in several cultures; 2) international studies - study of institutions and phenomena which cross national boundaries; and 3) foreign studies - analytical and descriptive studies of institutions in countries other than one's own.

Major Conclusions — Government, trade unions, employer organizations, and large corporations are assuming new importance in economic life. The challenge is to perceive and define problems more clearly for resolution through research, analysis and study in the manpower field. Continued coordination and integration of manpower administrations are needed to insure that overall manpower policies are consistent with national decision making, policies and goals. Countries must initiate a systematic effort to create an integrated program of statistical data for research to promote an active national manpower policy. Research and objective analysis is essential to achieve clarity of purpose and precision in defining plans to accelerate and reduce the costs of adjusting manpower policies, programs, and institutions to the process of modernization.

67:2.50

TITLE: Technical Change and Manpower Planning, Co-ordination at Enterprise Level

AUTHOR: Solomon Barkin, ed.

PUBLISHER: Paris, Organization for Economic Cooperation and Development, 1967.

KEY WORDS: Adjustments; Micro, Austria, Canada, France, Germany, Norway, Sweden, Great Britain, United States, Case Studies, Employment, Unemployment, Job Security, Working Conditions, Job Satisfaction; Private Policy (Seniority, Relocation, Retraining, Severance Pay, Pension Rights, G.A.W., Attrition, Early Retirement, Paygrades, Layoff Notification, Innovation Type, Planning, Labor-Management Cooperation); Empirical (Tables, Cases); Footnotes (None), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A report composed of 29 case studies prepared in eight countries on the methods of programming technological change and manpower adjustments. Methodology — The cases studied place an emphasis on planning and scheduling technological change and adjustments to it. Major Conclusions — Advance planning is essential to successful adjustment to change. A combination of long term planning; with room for variation should unexpected events occur; complete open communication between management and workers; and diverse methods of adjustment to allow for individual needs and differences seems to be the best formula for a smooth transition when technological innovation is undertaken.

67:3.00

TITLE: Training to Meet Problems of Technological Change
AUTHOR: B. W. Berenschot
PUBLISHER: New York, American Institute of Industrial Engineers, 1967
KEY WORDS: Adjustments; Macro, Unskilled Workers, Employment; Private Policy (Retraining), Public Policy (Manpower Programs, Vocational Education); Theoretical Discussion, Ongoing Trends, Projected Trends; Footnotes (None), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A general macro discussion of the recognized training changes needed to meet the social and economic problems associated with rapid technical change. Methodology — A descriptive discussion centered on private sector responses based upon the principal need of reform via a thorough revision of basic and specialized training. Several examples are produced to depict the changes in attitudes and procedures for vocational training and industrial management units. Major Conclusions — While management, trade unions, government officials and educators all recognize the need for improved training, sufficient training facilities of the proper type are not yet available in Europe or America. The author argues that pre-industrial vocational training should be designed around "families" of jobs, equipment, and skills and should be completed by coordinated specialized training within industry.

Capable employees should be given opportunities for training in stages rather than the traditional apprentice training. Additional education and theoretical background should be provided over a man's full working career. Thus, a career becomes a dynamic process of retraining which provides the individual with the highest rating and most skilled jobs while assuring society increasing productivity gains.

The author feels evidence indicates technological change makes reform manditory between basic and specialized training plus a more satisfactory coordination of these two types of training.

67:4.00

TITLE: "Dimensions of the Farm Labor Problem"
AUTHOR: C. E. Bishop, ed.
PUBLISHER: in Farm Labor in the United States, New York, Columbia University Press, 1967, pp. 1-17.
KEY WORDS: Adjustments; Historical, Macro, Micro, Age Groups, Racial Groups, Education, Agriculture, Northeastern U.S., North Central U.S., Southern U.S., Western U.S., Blue Collar Workers, White Collar Workers, Employment, Unemployment, Work Relationships, Earnings, Labor Mobility, Education; Private Policy (Relocation, Work Rules, Attrition), Public Policy (Full Employment, Urban Regional Policy, Information, Counseling, Manpower Programs, Relocation, Planning, Education); Review of the Literature, Empirical (Tables, Sample), Descriptive (Past Trends, Ongoing Trends); Footnotes (Many), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — An analysis of the agricultural labor force's adjustment to technological change since 1920. Emphasis is placed upon the role of in-migration and out-migration and job opportunities in the nonagricultural sector both in the U.S. as a whole and by region. Methodology — An empirical analysis relying on government reports and statistics, as well as variety of independent private studies. Major Conclusions — Two aspects of technological change operate on manpower needs in agriculture: resource substitution and firm size effects. The first and predominant effect leads to reduced manpower needs, while the second leads to increased requirements.

Since the 1920's large net out-migrations from agriculture have taken place, but since the 1950's the exodus has not been fast enough to offset the increased rate of technological change. The result has been a decline in the relative rate of return to farm labor. The highest rates of net out-migration have been among young, better-educated males searching for urban blue-collar jobs.

There has been no explicit manpower policy for farm labor. Vocational education and training efforts provided have been largely misguided with too much emphasis on farm-oriented aspects. Farm manpower policy should provide better information and counseling, updated education and training efforts geared to nonfarm areas, relocation grants and loans for easier migration.

67:5.00

TITLE: "Technological Change and Manpower Development in Advanced Production Systems"

AUTHOR: Elmer H. Burack and Frank H. Cassell

PUBLISHER: Academy of Management Journal, Vol. 10, No. 3, September 1967, pp. 293-308.

KEY WORDS: Adjustments; Micro, Steel Industry, Labor-Management, Skill Requirements, Working Conditions, Work Relationships, Labor Mobility, Employment; Private Policy (Planning, Seniority, Job Security, Innovation type, Skill Requirements); Empirical, Descriptive (Cases, Tables); Footnotes (Few), Bibliography (Few); Abstract.

ABSTRACT: Scope and Level — The innovation in production equipment, instrumentation, processes, and flow often lead to severe manpower dislocations among supervisors and technical support groups. In this paper, the authors are concerned with organizational aspects of these technological changes as they affect supervisory or managerial level people and aspects of manpower planning, organization, and utilization.

Methodology — The paper analyses managerial implications arising out of a series of innovations and improvements in a steel production unit.

Major Conclusions — This paper sets forth some concepts of technological change in advanced production system which can prove useful in discerning the managerial manpower implications of these developments. The framework for analysis was built on a group of research investigations undertaken in this area as well as a multi-year study of an advanced production system.

Managerial manpower planning involves a socio-technical approach in order to achieve an efficient working basis for change. Due to their nature, an advanced production system is particularly vulnerable to technological innovation. The planning for managerial manpower requires a recognition of the new work environments which are being created and the new operating needs which emerge from these systems. By the separation of scale and level effects, a basis is provided for identifying and segregating new areas of need or responsibility and consequently a basis for retraining and development of manpower.

67:6.00

TITLE: "Adjustment to Change"
AUTHOR: Canada, Department of Labour
PUBLISHER: *Labour Gazette*, Vol. 67, April 1967, pp. 234-235
KEY WORDS: Adjustments; Macro, Canada, Employment, Unemployment, Private-Public Relations, Work Relationships, Fringe Benefits, Labor Mobility; Private Policy (Seniority, S.U.B., Relocation, Retraining, Planning, Attrition, Early Retirement, Labor-Management Cooperation, Severance Pay, Work Sharing, Layoff Notification, Job Content, Transfer Options), Public Policy (Full Employment, Information, Counseling, Manpower Programs, Relocation, Urban-Regional Policy, Public Employment Program, Unemployment Compensation, Planning); Descriptive (Ongoing Trends); Footnotes (None), Bibliography (None); No Abstract.

67:7.00

TITLE: "Human Adjustment to Industrial Conversion"
AUTHOR: Canada, Department of Labour
PUBLISHER: *Labour Gazette*, Vol. 67, March 1967, pp. 174-175.
KEY WORDS: Adjustments; Micro, Canada, Employment, Unemployment, Collective Bargaining, Union-Management Powers, Unions, Private-Public Relations, Work Relationships, Fringe Benefits, Earnings, Job Satisfaction; Private Policy (Seniority, Retraining, Severance Pay, Planning, Pension Rights, S.U.B., Early Retirement, Labor-Management Cooperation, Job Security, Layoff Notification), Public Policy (Full Employment, Manpower Programs); Descriptive (Ongoing Trends); Footnotes (None), Bibliography (None); No Abstract.

67:7.50

TITLE: "Technological Change Provisions in Collective Agreements"
AGENCY: Canada, Department of Labour
PUBLISHER: Labour Gazette, Vol. 67, No. 11, November 1967, p. 687.
KEY WORDS: Adjustments; Micro, Canada, Collective Bargaining; Private Policy (Layoff Notification, Severance Pay, Work Sharing, Retraining, Labor-Management Cooperation); Descriptive (Ongoing Trends); Footnotes (None), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A brief description of recent clauses written into collective agreements which were directly related to problems created by technical change. Methodology — The study is strictly empirical in nature in that it reports the findings from a survey of 471 collective agreements. Major Conclusion — The major conclusion that is drawn from this study is that the most significant difference among the various union-management procedures is whether the decision-making process is through consultation or negotiation.

The two most important provisions that were drawn up to meet the challenge of technological change were retraining and relocation. On the other hand, the report finds that provisions for sharing work, such as reduction in hours or earlier retirement, were seldom used to cope with problems relating to technological change.

67:8.00

TITLE: "Some Impacts of Office Automation upon Status Role Change and Depersonalization"
AUTHOR: Dean J. Champion
PUBLISHER: Sociological Quarterly, Vol. 8, No. 1, Winter 1967, pp. 71-84.
KEY WORDS: Adjustments; Micro, Banking, Case Study, Midwest U. S., Employment, Unemployment, Work Relationships, Hours of Work, Job Satisfaction, Alienation of Workers; Private Policy (Retraining, Planning, Attrition, Job Security, Job Content, Skill Requirements); Empirical (Correlation, Table, Sample, Cases); Footnotes (Moderate), Bibliography (None); No Abstract.

67:8.25

TITLE: "The Economics of Technological Change and the Demise of the Sharecropper"
AUTHOR: Richard H. Day
PUBLISHER: American Economic Review, Vol. 57, No. 3, June 1967, pp.427-449.
KEY WORDS: Adjustments; Micro, Skilled Workers, Unskilled Workers, Sharecroppers, Agriculture, Mississippi Delta, Unemployment; Public Policy (Relocation); Theoretical Model, Empirical; Footnotes (Moderate), Bibliography (Medium); Abstract.

ABSTRACT: Scope and Level -- An economic model of production, investment, and technological change tested using data for the Mississippi Delta farm economy. Methodology -- An economic model which explains how the interaction of geographic, biological, technological, and economic forces lead, in the Mississippi Delta region, to a history of advances in productivity and declines in labor requirements at a revolutionary rate between the years 1939 and 1958. Major Conclusions -- The author defined four stages of representative technology over the period: 1) Stage I: sharecropper unit; mule-powered cultivation, hand picking of cotton and corn, 2) Stage II: partial mechanization of pre-harvest operations; tractor cultivation, mule cultivation, hand-picking of cotton and corn, small scale combines for harvesting soybeans and oats, three-man hay balers for hay crops, 3) Stage III: complete mechanization of pre-harvest operations except for some hand weeding of cotton and corn, handpicking of cotton, complete mechanization of corn, self-propelled combines for oats and soybeans, one man hay balers, and 4) Stage IV: complete mechanization except for some handweeding of cotton. Given these levels of technology, certain conclusions were drawn from the model.

The trend in farm labor requirements during the overall period was a drastic decrease in labor demand for both skilled and unskilled workers. This trend was a two stage push of labor off the farm. More specifically, as technology shifted from Stage I through Stage III, the demand for year round workers decreased drastically but the demand for seasonal workers (harvest time) was not reduced. This had the effect of pushing workers off the farm into small towns near the plantations where they could be called on for seasonal work.

As Stage IV was reached in the technology, the demand for seasonal labor also decreased with the effect of pushing labor out of the agricultural sector altogether.

67:9.00

TITLE: "Perception of and Attitudes Toward Automation: A Study of Local Union Leaders"

AUTHOR: Steven E. Deutsch

PUBLISHER: Labor Law Journal, Vol. 18, July 1967, pp. 396-405

KEY WORDS: Adjustments; Historical, Micro, Age Groups, Education Requirements, Coal Mining Industry, Steel Industry, Railroad Industry, Ohio, Unskilled Workers, Semi-Skilled Workers, Skilled Workers, Employment, Unemployment, Collective Bargaining, Blue Collar-White Collar, Private-Public Relations, Work Rules, Hours of Work, Fringe Benefits, Labor Mobility; Private Policy (Relocation, Retraining, Planning, Layoff Notification, Labor-Management Cooperation, Job Security, Work Sharing), Public Policy (Manpower Programs, Relocation, Unemployment Compensation, Income Maintenance); Review of the Literature, Empirical (Tables, Sample), Descriptive (Ongoing Trends); Footnotes (Moderate), Bibliography (None), No Abstract.

67:10.00

TITLE: "Automation and Full Employment"
AUTHOR: Edward D. Kalachek
PUBLISHER: Trans-Action, Vol. 4, No. 4, March 1967, pp. 24-29.
KEY WORDS: Adjustments; Historical, Macro, High Educated Workers, Low Educated Workers, Blue Collar Workers, White Collar Workers, Unskilled Workers, Skilled Workers,Employment, Unemployment, Education Requirements, Blue Collar-White Collar, Private-Public Relations, Work Relationships, Hours of Work, Wage Effects, Earnings, Labor Mobility; Private Policy (Relocation, Retraining, Planning, Severance Pay, Shorter Work Week, Paygrades, Work Sharing, Job Security, Overtime, Skill Requirements), Public Policy (Full Employment, Monetary Policy, Fiscal Policy, Income Policy, Public Employment Program, Information, Manpower Programs, Relocation, Unemployment Compensation, Education); Empirical, Descriptive (Past Trends, Ongoing Trends, Projected Trends, Futurist Views); Footnotes (None), Bibliography (None); No Abstract.

67:11.00

TITLE: Union Printers and Controlled Automation
AUTHOR: Harry Kelber and Carl Schlesinger
PUBLISHER: New York, The Free Press, 1967.
KEY WORDS: Adjustments; Historical, Printing Industry, Typographical Union, Labor-Management, Employment, Collective Bargaining, Union-Management Powers; Private Policy (Retraining, Pension Rights, Union Jurisdiction, Job Security, Apprenticeship, Innovation Timing); Descriptive (Past Trends, Ongoing Trends, Future Trends); Footnotes (Moderate), Bibliography (Moderate); Abstract.
ABSTRACT: Scope and Level — A comprehensive study of the effects of automation on the printing industry and of the adjustments made to technological change. Methodology — An historical examination of automation and the printing industry. Major Conclusions — Unions, especially the International Typographical Union, have been quite effective in using collective bargaining to gain favorable positions with respect to automation. Adjustment in most cases has not been severe due to union clout used to minimize displacement and other possible ill effects.

67:12.00

TITLE: "Technological Flexibility and 'Golden Age' Equilibrium Growth"
AUTHOR: Denneth K. Kurihara
PUBLISHER: Indian Economic Journal, Vol.14, No.4, January-March, 1967, pp.521-528.
KEY WORDS: Adjustments; Macro, Employment, Unemployment; Public Policy (Monetary Policy, Fiscal Policy, Economic Growth); Theoretical Model; Footnotes (Moderate), Bibliography (None); No Abstract.

67:12.50

TITLE: "Collective Bargaining in the Postwar Period"
AUTHOR: Robert M. Macdonald
PUBLISHER: Industrial Labor Relations Review, Vol. 20, No. 4, July 1967, pp. 553-577.
KEY WORDS: Adjustments; Historical, Unions, Management Practices, Collective Bargaining; Private Policy (Seniority, Relocation, Retraining, S.U.B., G.A.W., Attrition, Work Rules); Descriptive (Past Trends, Ongoing Trends, Future Trends); Footnotes (Few), Bibliography (None); Abstract.

ABSTRACT: Scope and Level -- A Study of collective bargaining in the postwar period. Methodology -- Major developments in collective bargaining in the postwar period are reviewed, with particular emphasis on those developments which illuminate the current status of collective bargaining and the probable direction of future developments. Major Conclusions -- Rapid and pervasive change in our society in recent years has posed a challenge of adjustment for all contemporary institutions. Developments in collective bargaining are a response both to internal needs of the parties and to stimuli in the external environment. Although collective bargaining has not provided perfect solutions to all labor and management needs, it has shown remarkable flexibility and adaptability to new and often trying circumstances.

67:12.75

TITLE: Technology and Manpower in the Health Service Industry, 1965-1975
AGENCY: Manpower Administration, Office of Manpower Policy.
PUBLISHER: *Manpower Research Bulletin* #14, Washington, U. S. Department of Labor, 1967.
KEY WORDS: Adjustments; Macro, Health Services, Employment, Skilled Workers, Wage Effects, Earnings, Collective Bargaining, Labor Mobility; Private Policy (Retraining, Planning, Labor-Management Cooperation), Public Policy (Information, Manpower Programs, Minimum Wages);Empirical (Tables), Descriptive (Ongoing Trends, Future Trends); Footnotes (Many), Bibliography (Large); Abstract.
ABSTRACT: Scope and Level — A discussion of the relationship that exists between technological advances and other developments. Ways in which these relationships will affect manpower needs in the health service industry during the decade 1965-1975 are considered. Methodology — The report uses available information and expert judgment to develop projections of future employment in the health service industry. Major Conclusion — This report provides a general perspective and some conclusions which may be helpful in planning broad programs and policies. The analysis is used as the basis for growth projections in health service employment and to determine how trends will affect health jobs in the future.

This report is composed of three chapters. The first chapter presents and analyzes trends in the structure and characteristic of health service employment. A summary is also made at problems in meeting health service manpower needs and job requirements. The second chapter identifies the technological developments which are likely to have an impact on manpower in the time period 1965-1975. Chapter Three analyzes the combined effect of expected trends in the demand for health services and of key technological developments on the structure of health service employment.

67:13.00

TITLE: "The Impact of Cybernation"
AUTHOR: Donald N. Michael
PUBLISHER: Melvin Kranzberg and Carroll W. Pursell, Jr., Technology in Western Civilization, Vol. II, New York, Oxford University Press, 1967, pp. 655-669.
KEY WORDS: Adjustments; Macro, Employment, Skill Requirements, Blue Collar-White Collar, Leisure, Job Satisfaction; Public Policy (Relocation, Public Employment Programs, Income Maintenance, Manpower Programs, Shorter Work Week, Education); Theoretical Discussion, Descriptive (Ongoing Trends); Footnotes (None), Bibliography (Moderate); Abstract.
ABSTRACT: Scope and Level — A discussion of cybernation and its impact on society. Methodology — Cybernation and its effect on employment, the worker, leisure, and education are discussed. Major Conclusions — Skill levels will shift as a result of cybernation for both blue collar and white collar jobs. High level professionals will need more knowledge to carry out their jobs. Paraprofessionals will be in demand to help them with their work. Middle level management and supervisors will be less in demand as computers take over supervisory tasks in the production process. Cybernation introduces uncertainty into the work environment and necessitates restructuring and retraining on many levels.

Increased leisure time for those with middle level skills, and money to enjoy it, combined with increased unemployment for the poor and unskilled has the potential for causing great amounts of social unrest. In general, increased leisure time will cause readjustment for most Americans who are unaccustomed to large amounts of free time.

Education must readjust as a result of cybernation. It will become more of a continuous life-long process both for job retraining and personal fulfillment to make leisure more meaningful.

67:13.75

TITLE: The Challenge of Automation, a manual of sound industrial relations programming in the field of automation, outlining problem areas and offering logical approaches for resolving the issues, based on practices that have proven successful.
AUTHOR: National Association of Manufacturers. Industrial Relations Division
PUBLISHER: New York, National Association of Manufacturers, 1967.
KEY WORDS: Adjustments; Micro, Management Practices; Private Policy (Retraining, Severance Pay, Job Security, Relocation, Innovation Timing, Skill Requirements); Theoretical Discussion; Footnotes (None), Bibliography (Small); No Abstract.

67:14.00

TITLE: Technology, Economic Growth, and Public Policy, especially Part II "Adjustment to Growth and Technological Change"
AUTHOR: Richard R. Nelson, Merton J. Peck, and Edward D. Kalachek
PUBLISHER: Washington, The Brookings Institution, 1967.
KEY WORDS: Adjustments; General Equilibrium, Macro, Older Workers, Unemployment; Private Policy (Retraining, Relocation, Seniority, Paygrades, Layoff Notification, Severance Pay, Attrition, Skill Requirements, Advance Notification), Public Policy (Full Employment, Information, Counseling, Placement Service, Manpower Programs, Public Employment Programs); Theoretical Discussion, Empirical (Tables); Footnotes (Moderate), Bibliography (Large); Abstract.

ABSTRACT: Scope and Level — A loosely theoretical general equilibrium approach, i.e., macro implications discussed but with reference to shifts in employment by industry and occupation groups. Methodology — A theoretical discussion of private sector and public sector responses to the impact of technological change on employment based on statistics and business policies. Several case studies are cited. Main Conclusions — The labor market is quite flexible and the impact of technology on jobs is significant only on the older workers whose skills are specific for present jobs and who usually are not quickly rehired. Structural unemployment did not increase relatively during the 1947-1965 period. In fact theory and evidence indicates enhanced technological change usually leads to more rapid economic growth and increased employment.

To aid worker adjustment the private sector should broaden the seniority unit to its widest possible base. This helps older workers maintain employment. Firms should provide more in-plant training, relocation allowances, and have a limit on the number of paygrades an employee may be downgraded. In cases where termination is required, longer lead time notice and broader and larger severance pay systems would help.

Public policy in aiding adjustment in the United States has been less than satisfactory. Two basic public responses are discussed: 1) helping individuals adjust, and 2) maintaining a full employment policy mix. For the individual, a requirement for longer lead time notices of job loss would allow the Employment Service more time to contact and aid the displaced worker, especially older workers. The Employment Service can do more to provide job information, counseling, placement and retraining especially for older persons. This would require the Employment Service to increase their emphasis on older worker problems.

Public policy, while maintaining full employment, must guard against inflation brought on by rapid growth generated by technological change, aided by reduced price pressures due to higher productivity growth rates. There is a continuous need for technological improvement since U.S. workers have expectations of ever increasing real incomes. If a period of extremely rapid change occurred, public employment could be used as an interim measure. During early stages of technological innovation in an industry, a few high skilled people are needed for the breakin and implementation but then machines and jobs are made more simplistic and lower skill personnel are again needed in the long run. A majority of evidence indicates that average education levels are increasing faster than the need for increased skills in the economy.

67:16.00

TITLE: "Consequences of Voluntary Early Retirement, A Case Study of a New Labour Force Phenomenon"

AUTHOR: John P. Owen and L. D. Belzung

PUBLISHER: British Journal of Industrial Relations, Vol. 5, No. 2, July 1967, pp. 162-189.

KEY WORDS: Adjustments; Micro, Older Workers, Oil Industry, Baytown, Texas, Case Study, Employment, Labor Mobility, Sociological and Psychological Effects; Private Policy (Early Retirement, Layoff Notification); Empirical (Sample, Case); Footnotes (Few), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A study of employees in the petroleum industry who voluntarily accepted early retirement at a reduced pension at as early an age as 50 years. Methodology — Workers who chose early retirement from the Humble Refinery at Baytown, Texas were interviewed one year after the workforce reduction to determine what economic, sociological and psychological changes had occurred in their lives. Major Conclusion — If workers are provided with adequate economic security ($250 per month in 1962 dollars) many will choose early retirement. Many older workers may seek active employment, either full or part time, even if they accept early retirement. Reasons for this are added income, to "keep busy", and other non-wage motives. Those who do seek employment are quite immobile, however, preferring to stay within their community rather than in the same occupation. Early retirement did not appear to cause much financial suffering. The men generally seemed to be enjoying their retirement status and had excellent mental health and good family relations.

67:17.00

TITLE: "An Epilogue to Job Displacement: A Case Study of Structural Unemployment"

AUTHOR: John P. Owen and L. D. Belzung

PUBLISHER: The Southern Economic Journal, Vol. 33, No. 3, January 1967, pp. 395-408.

KEY WORDS: Adjustments; Micro, Oil Industry, Baytown, Texas, Case Study, Sociological and Psychological Effects, Unemployment; Private Policy (Relocation, Retraining, Severance Pay, Early Retirement, Advance Notification, Layoff Notification); Descriptive (Past Trends); Footnotes (None), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A study of the impact of plant shutdown on displaced workers, with special reference to the Humble Refinery in Baytown, Texas. Methodology — The results of a study done to determine the effectiveness of policies the company had applied to soften the impact of the Baytown work force reduction. These results are compared to results obtained by Haber, Ferman, and Hudson in their summary of 1929-1961 job displacement studies. Major Conclusion — Early retirement is well received by older workers if their monthly compensation is adequate. Often, early retirees who look for another job do so for other than economic reasons, to avoid boredom, for example. Many workers in Baytown located a job via personal solicitation, referral by friends, or newspaper ads rather than by using formal channels. If formal employment exchanges are to be fully utilized their existence and purpose must be well publicized.

Good mental health and good family relations following a job displacement will be achieved if there is a reasonable floor of economic security, either through adequate early retirement provisions or severance pay. A long period of continued unemployment, however, may lead to a loss of morale and a lower state of mental well-being.

Careful advance planning on the company's part is essential to a successful adjustment.

67:18.00

TITLE: "Means of Adjustment to Technological Displacement"
AUTHOR: Joseph A. Pichler
PUBLISHER: Monthly Labor Review, Vol. 90, No. 3, March 1967, pp. 32-33.
KEY WORDS: Adjustments; Micro, Case Study, Employment, Unemployment, Skill Requirements, Education Requirements; Private Policy (Relocation, Retraining, Severance Pay, Transfer Options); Empirical (Cases); Footnotes (Few), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A summary of findings of follow up studies of three plant closures. Methodology — An assessment of the contributions of provisions for training, severance pay, and interplant transfer to the adjustment patterns of displaced workers. Major Conclusion — Judgement of training's effect on job market adjustments depends on the criteria chosen. By the unemployment rate standard, it was only effective where there was high labor demand after training was completed. Post shutdown earnings did not appear to be affected by training. However, trainees did enjoy greater upward skill mobility than nontrainees so their long run wage progression prospects may have been enhanced.

Those workers with a large severance payment showed some tendency to return to work later than those with a lesser payment and in some cases did not return to work at all.

The transfer option appeared to be the most effective mechanism for adjustment to shutdown. Those workers who chose the transfer option were most satisfied.

67:19.00

TITLE: "The Economics of Privately Negotiated Technological Change Provisions"

AUTHOR: David Phillips Ross

PUBLISHER: Industrial Relations Research Association, The Development and Use of Manpower, Proceedings of the Twentieth Annual Meeting, Vol. 20, 1967, pp. 375-384.

KEY WORDS: Adjustments; Micro, Canada, Collective Bargaining, Employment; Private Policy (Seniority, Relocation, Retraining, Severance Pay, Labor-Management Cooperation, Pension Rights, S.U.B., G.A.W., Shorter Work Week, Vacations, Layoff Notification, Early Retirement); Empirical (Sample); Footnotes (Few), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — An assessment of the efficiency of different collective bargaining agreement provisions in compensating displaced workers. Methodology — The author surveyed 471 agreements consisting of all recent agreements on file with the Canada Department of Labor covering firms with 500 or more employees. Four groups of provisions were examined - income maintenance, employment sharing, employee adaptation, and joint union-management committees and procedures. Major Conclusion — The effectiveness of each of the provisions depends mainly on the industry, the type of displacement, and other more specific conditions. In general, some workers may benefit from full income maintenance but often at the expense of increased unemployment of fellow workers; employment sharing often has the effect of increasing unemployment; the effectiveness of employer sponsored retraining programs depends on the demand for the retrained labor.

The efficiency of the programs is dependent on their effectiveness and on the costs. The author concludes that retraining is likely to be the most efficient of the major provisions. Full income maintenance is likely to be the least efficient. Combinations of all provisions are necessary depending on the characteristics of workers in a given firm. A joint union-management committee is best suited to selecting the most efficient compensation program.

67:20.00

TITLE: "Adjustment to Plant Closure, Cooperation in Planning for the Transfer of Negro Workers into a White Community"
AUTHOR: James L. Stern
PUBLISHER: Monthly Labor Review, Vol. 90, No. 1, January 1967, pp. 42-46.
KEY WORDS: Adjustments; Micro, Minority Group Workers, Labor Mobility; Private Policy (Relocation, Advanced Notification, Planning); Descriptive (Past Trends); Footnotes (Few), Bibliography (None); No Abstract.

67:21.00

TITLE: "The Economics of Privately Negotiated Technological Change Provisions - Discussion"
AUTHOR: Ernst W. Stromsdarfer
PUBLISHER: Industrial Relations Research Association, Proceedings of the Twentieth Annual Meeting, Vol. 20, December 1967, pp.391-393.
KEY WORDS: Adjustments; Macro, Unemployment; Private Policy (S.U.B., Severance Pay, Work Sharing, Retraining), Public Policy (Manpower Programs); Theoretical Discussion; Footnotes (None), Bibliography (None); No Abstract.

67:22.00

TITLE: "Farm Labor Adjustments to Changing Technology"
AUTHOR: G. S. Tolley and B. M. Farmer
PUBLISHER: in C. E. Bishop, ed., Farm Labor in the United States, New York, Columbia University Press, 1967, pp. 41-52.
KEY WORDS: Adjustment; Historical, Macro, Farm Workers, Employment, Labor Mobility; Private Policy (Job Content), Public Policy (Minimum Wages, Relocation, Manpower Programs, Legislation); Descriptive (Ongoing Trends, Future Trends), Empirical (Tables); Footnotes (Few), Bibliography (Small); Abstract.
ABSTRACT: Scope and Level — A discussion of how technological change would shift the supply of farm labor and what affects a change in the minimum wage might have on the supply of farm labor. Methodology — An analysis of trends and projected trends of farm labor due to increased technology and the ramifications these trends may leave. Major Conclusion — Two policy problems concerning manpower allocation may be considered. One policy relates to the hired worker and the second relates to the self-employed farmer. Both policy problems are associated with manpower adjustments due to technological change.

67:22.25

TITLE: "Adjusting Manpower Requirements to Constant Change"
AGENCY: U. S. Department of Labor
PUBLISHER: *Monthly Labor Review*, Vol.90, No.10, October 1967, pp.36-41.
KEY WORDS: Adjustments; Historical, Micro, Textile Industry, France, Employment, Labor Mobility; Private Policy (Relocation, Transfer Options, Retraining); Descriptive (Ongoing Trends); Footnotes (None), Bibliography (None); No Abstract.

67:22.50

TITLE: "Automation and Non-Manual Workers"
AUTHOR: K. F. Walker
PUBLISHER: In Labor and Automation, Bulletin No. 5, Geneva, International Labor Office, 1967.
KEY WORDS: Adjustments; Micro, White Collar Workers, Clerical Workers, Younger Workers, Older Workers, Unions, Western Europe, Japan, Canada, Australia, U. S., Banking, Insurance Industry, Skill Requirements, Working Conditions; Private Policy (Retraining, Relocation, Job Content, Attrition, Pay Incentives, Shorter Work Week, Planning); Empirical (Sample); Abstract.

ABSTRACT: Scope and Level — The study was made with the following objectives: 1) to review the impact of automation on non-manual workers; 2) to examine the ways in which these workers and organizations have reacted to new technology as a whole and to specific problems arising from automation: redundancy, retraining, relocation, changed working conditions and job content; 3) to consider the implications of the spread of automation for non-manual workers and their organizations.

The study covers principal industrial market economies of Western Europe, Canada, the United States, Japan and Australia.

Methodology — Study based on a review of published surveys and investigations and information collected from trade unions and employees. A survey was made of trade unions concerned with non-manual workers to obtain information on problems created by automation and ways in which unions were adapting to the spread of automation. A parallel survey was made among employers' organizations and private and government employers limited to problems arising from introduction of electronic computers, principally in banks and insurance companies.

Major Conclusions — Principal impact of automation and advanced technology in non-manual employment is among office workers and operators of telephonic and tele-communications equipment. Displacement of employees has been coped with by adjustment of recruitment, natural attrition, and transfer of employees to other jobs. Prospects of promotion appear to have improved as a result of automation in offices for younger workers. Some older workers in supervisory positions have lost status and future promotion prospects, where they have not been able to meet selection and training standards. A need for further consideration of appropriate career structure for computer staff and for the career prospects of employees whose traditional ladder of promotion has been removed by automation.

Automation of clerical work does not appear to have significant effects upon interest in unionism or upon the structure of unions concerned with non-manual workers. Working of shifts has been extended in areas of clerical employment, accompanied by extra cash allowances and in some cases a shorter working week for shift workers. Problems arising from automation appear principally from a failure to foresee organizational implications and faulty coordination.

67:23.00

TITLE: "The Many Faces of Technology"

AUTHOR: Edgar Weinberg and Robert L. Ball

PUBLISHER: Occupational Outlook Quarterly, Vol. 2, No. 2, May 1967, pp. 7-10.

KEY WORDS: Adjustments; Macro, Employment, Labor Mobility, Blue Collar-White Collar, Skill Requirements; Private Policy (Relocation, Retraining, Innovation Type, Job Content), Public Policy (Counseling, Placement Service, Information, Manpower Programs); Descriptive (Ongoing Trends, Future Trends); Footnotes (None), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — The article relates to changing technological innovations and how the innovations are affecting employment skills and job security of workers. Methodology — A descriptive analysis of ongoing trends in technology and the effects these trends have on job trends. Major Conclusion — The average worker will have greater need for adaptability as a changing technology reshapes job requirements. Consequently a knowledge of existing and impending technological changes can help industry, union and governmental agencies formulate retraining and readjustment policies. This will allow for a minimum of a disruptive effective on workers.

67:24.00

TITLE: "McGill Conference on Human Values and Technology - Impact of Change on Work and Leisure"
AUTHOR: Harold L. Wilensky
PUBLISHER: Monthly Labor Review, Vol. 90, September 1967, pp. 21-22.
KEY WORDS: Adjustments; Macro, Employment, Leisure, Hours of Work, Earnings, Sociological and Psychological Effects; Private Policy (Overtime, Leisure, Shorter Work Week), Public Policy (Manpower Programs, Education); Descriptive (Ongoing Trends); Footnotes (None), Bibliography (None); Abstract.
ABSTRACT: Scope and Level — A discussion of the impact of a changing society on the leisure vs. work concept. Methodology — The study discussed the mistaken concept that society is becoming leisure heavy and consequently people have very little to do with free time. Major Conclusion — People desire leisure time but substitute this additional leisure time with more work. The skilled workman of today annually works the same number of hours as his 13th century counterpart (1,900 to 2,500).

67:25.00

TITLE: "The Automatic Factor: The Age of Harmony, Leisure, and Plenty?"
AUTHOR: B. R. Williams
PUBLISHER: In Technology, Investment, and Growth, London, Chapman and Hall, Ltd., 1967.
KEY WORDS: Adjustments; Macro, General Equilibrium, Capital-Labor Ratio, Great Britain, Blue Collar-White Collar, Skill Requirements, Employment, Labor Mobility, Leisure; Private Policy (Retraining, Planning, Labor-Management Cooperation, Job Security, Innovation Timing), Public Policy (Public Employment Programs, Information, Retirement); Descriptive (Futurist Views), Empirical; Footnotes (None), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A study of the affects of automatic control and automatic production on human harmony, leisure, and plenty. Methodology — An empirical and descriptive analysis of the argument for and against the automatic factory with some of the possible social and economic problems that may occur. Major Conclusion — Although not on the threshold of the automatic factory, technology is slowly moving in that direction. Consequently, the problems and possible solutions must be anticipated now. Due to auotmation, society will experience a shift in the capital-labor ratio. A decrease in the amount of labor required would cause a shift in the composition and structure of the labor force. Fear of increased unemployment, unmanageable technical problems and increased overhead cost would plague unions and management. Ignorance and indolence of market structures and production methods would also be prevalent.

The argument against the automatic factory states we will create robot machines and thus endanger our own safety. The argument for automatic factories states that increased output and increased leisure will allow for the creation of new commodities and further appreciation of the aesthetic values of life.

66:0.50

TITLE: "Adjustment to Technological Change Within the Firm; One Aspect of Active Manpower Policy"

PUBLISHER: OECD Observer, No. 22, 1966, pp. 34-35.

KEY WORDS: Adjustments; Macro, Micro, Unemployment, Private-Public Relations, Labor Mobility; Private Policy (Seniority, Relocation, Retraining, Severance Pay, Pension Rights, S.U.B., G.A.W., Transfer Options, Attrition, Early Retirement, Layoff Notification, Advanced Notification), Public Policy (Manpower Programs); Descriptive (Ongoing Trends); Footnotes (Few), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A discussion of various methods for easing adjustments to technological change. Methodology — Several methods of adjustments to change, such as attrition, severance pay, advance notice, and retraining, are described. Uses made of these methods in several industries in the U.S. and Britain are discussed. Major Conclusion — A concentrated effort on the part of industry to help workers adjust to change, especially through intraplant programs of retraining and transfer, may alleviate some of the pressure on government to take over this responsibility.

66:1.00

TITLE: "A Study of, and Suggested Recommendations for Alleviating, the Organizational and Human Problems Associated with Automation Maintenance"
AUTHOR: Arvon D. Allen, Jr.
PUBLISHER: unpublished Ph.D. Dissertation, Boulder, University of Colorado, 1966.
KEY WORDS: Adjustments; Micro, Agriculture, Skill Requirements; Private Policy (Retraining, Job Content, Seniority, Skill Requirements, Work Sharing); Empirical (Sample); Footnotes (Many), Bibliography (Large); No Abstract.

66:2.00

TITLE: "On the Human Condition"
AUTHOR: Hannah Arendt
PUBLISHER: In Alice Mary Hilton, ed., The Evolving Society, Proceedings of the First Annual Conference on the Cybercultural Revolution - Cybernetics and Automation, New York, The Institute for Cybercultural Research, 1966, pp. 213-219.
KEY WORDS: Adjustments; Historical, Leisure, Hours of Work, Work Time; Theoretical Discussion, Descriptive (Past Trends, Future Trends); Footnotes (None), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A short discussion of the problems the average citizen of the U.S. will face as a result of cybernation. Methodology — The author traces the importance of work in the life cycle (living and laboring, exhaustion and recovery) and speculates on the future of man now that the time the average person will spend at work is rapidly decreasing. Major Conclusion — It appears that a "reversed pyramid" will occur in our culture. That is, rather than many laboring for the few and the few having the highest status and the most leisure, the few with the most status, those with executive positions, will work the hardest and those with the less important jobs will have much leisure, or perhaps idleness, vacant time. Economic problems resulting from cyberculture are solvable. The real task before us is to make constructive use of vacant time.

66:3.00

TITLE: "A Canadian Automation Code"
AUTHOR: A. Balloch
PUBLISHER: Monthly Labor Review, Vol.89, No.5, May 1966, pp.520-522.
KEY WORDS: Adjustments; Micro, Management Practices, Government, Employment; Private Policy (Retraining, Early Retirement, Planning, Layoff Notification), Public Policy (Manpower Programs); Descriptive (Ongoing Trends); Footnotes (None), Bibliography (None); No Abstract.

66:4.00

TITLE: "Programming of Technical Changes and Manpower Adjustments"
AUTHOR: Solomon Barkin
PUBLISHER: Chapter 23 in Jack Stieber, ed., Employment Problems in Automation and Advanced Technology, New York, St. Martin's Press, 1966, pp.432-445.
KEY WORDS: Adjustments; General Equilibrium, Organization for Economic Cooperation and Development, Employment, Skill Requirements, Work Rules, Work Relationships; Private Policy (Planning), Public Policy (Planning, Information); Descriptive (Ongoing Trends, Future Trends); Footnotes (None), Bibliography (None); No Abstract.

66:5.00

TITLE: "The Negro and Cybernation"
AUTHOR: James Boggs
PUBLISHER: In Alice Mary Hilton, ed., The Evolving Society, Proceedings of the First Annual Conference on the Cybercultural Revolution - Cybernetics and Automation, New York The Institute for Cybercultural Research, 1966, pp. 167-172.
KEY WORDS: Adjustments; Historical, Blacks, Employment, Unemployment, Skill Requirements; Theoretical Discussion, Descriptive (Past Trends, Ongoing Trends, Future Trends); Footnotes (None), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A discussion of the role of the Negro in American Society and the effects technological development will have on this role. Methodology — A brief review of the role of the Negro in American Society and a projection of the implications of this role for the future. Major Conclusion — Negroes by virtue of their past experience, are better prepared for life and leadership in the new cybercultural society than are whites. Cybernation is taking over more and more of the work that now requires a highly technical education and is held mainly by whites. A cybercultural society will place more emphasis on political-social interaction type activity. In recent years, Negroes have generally gone in one of two directions. First of all, Negroes have been the largest group to enter the fields of education, social and civil service, which deal with political and social questions. Thus, as society evolves the Negro will be best able to adapt because he has been employed in a field which has enabled him to acquire the necessary skills for social interaction. The other alternative is that he has been thrown out of a job altogether. Since that is true for many, as a group, Negroes also constitute a mass force with the most concentrated political needs and, as such, have a political orientation. Whites have been too deeply entrenched both physically and emotionally in the economic structure to be able to catch up with Negroes in terms of political orientation or the concentration on human relations.

66:6.00

TITLE: Understanding Automation, Elements for Managers
AUTHOR: Roger W. Bolz
PUBLISHER: Cleveland, Ohio, The Penton Publishing Company, 1966.
KEY WORDS: Adjustments; Historical, Macro, Micro, Management Practices, Employment, Skill Requirements, Wage Effects; Private Policy (Relocation, Retraining, Pension Rights, S.U.B., G.A.W., Attrition, Early Retirement, Planning, Job Security, Layoff Notification, Apprenticeship, Skill Requirements), Public Policy (Fiscal Policy, Information, Counseling, Education); Theoretical Discussion, Empirical (Tables); Footnotes (Moderate), Bibliography (Small); Abstract.

ABSTRACT: Scope and Level — A book directed at management which points out the advantages of and necessity for adopting new technology. Methodology — Trends in automation are discussed along with an historical perspective on resistance to change. Ways of successfully accepting changing technology and of profitably adapting it are described. Major Conclusion — Automation and technological change will continue to have effects on the industrial scene. Industry leaders must work to make a smooth transition to new methods. It is management's responsibility to persuade workers, through improved working conditions and manpower programs directed at retraining, that technological change can be to their advantage.

Automation, job shifts, better wages and working conditions, and lower costs are all part of the same picture and must go together.

66:7.00

TITLE: Automation and Economic Progress
AUTHOR: Howard R. Bowen and Garth L. Mangun, eds.
PUBLISHER: Englewood Cliffs, New Jersey, Prentice Hall, 1966.
KEY WORDS: Adjustments; Macro, Micro, Employment, Unemployment, Private-Public Relations; Private Policy (Seniority, Relocation, Retraining, Severance Pay, Pension Rights, S.U.B., G.A.W., Attrition, Early Retirement, Shorter Work Week, Job Security, Work Sharing, Layoff Notification, Apprenticeship), Public Policy (Full Employment, Monetary Policy, Fiscal Policy, Urban-Regional Policy, Public Employment Programs, Information, Counseling, Manpower Programs, Relocation, Minimum Wages, Shorter Work Week, Planning, Public Representation in Bargaining, Education, Income Maintenance); Theoretical Discussion, Empirical (Tables); Footnotes (None), Bibliography (None); Abstract.
ABSTRACT: Scope and Level — A condensation of the report of the Commission on Technology, Automation, and Economic Progress and selected studies done for the Commission. Methodology — In the first half of the book, major findings, conclusions and recommendations of the commission are examined. The studies in the second half have been abstracted individually where relevant. Major Conclusions — The main focus of the book is conclusions drawn from the work of the Commission. Some broad conclusions stand out, however. Continued use of fiscal and monetary policy to promote economic growth is essential. Broader and more comprehensive education for everyone is necessary. Some form of income maintenance program should be established. A nationwide system of job information should be implemented. Regional development to minimize geographic displacement should be undertaken by Federal Reserve Districts. Planning, on the part of government and firms is essential to successful adjustments to change. Increased productivity and new technologies should be used for unmet human and community needs.

66:8.00

TITLE: "Automation and Wage Determination"
AUTHOR: James R. Bright
PUBLISHER: In John H. G. Crispo, Industrial Relations, Challenges and Responses, Toronto, University of Toronto Press, 1966, pp. 19-59.
KEY WORDS: Adjustments; Micro, Job Content, Job Security, Skill Requirements, Wage Effects; Private Policy (Seniority, Retraining, G.A.W., Skill Requirements, Pay Incentives); Theoretical Discussion, Descriptive (Ongoing Trends, Future Trends); Footnotes (Few), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A discussion of the effects of automation on jobs, particularly skill level, and the appropriateness of various wage determination developments. Methodology — Trends in mechanization are traced, along with effects on skill level requirements. Various wage determination policies are discussed. Major Conclusion — Increasing automation does not necessarily result in an upgrading of work force skill requirements to a major extent. In fact, automation often tends to reduce the skill and training required on individual tasks. This presents problems for wage determination.

Job security, with the encouragement of technological progress, is necessary given that skill levels usually change and productivity usually increases with increased automation. The author concludes that automation will ultimately lead us to a salaried industrial society.

The author sees two problems with the increase of automation. One is the apparent decrease in labor demand, and the other the loss of craftsmanship and pride in work.

He foresees the real threat of technological development not in automation within an industry but rather in displacement of an entire industry by technologically superior development, e.g. missle vs. manned aircraft.

66:9.00

TITLE: "The Relationship of Increasing Automation to Skill Requirements"
AUTHOR: James R. Bright
PUBLISHER: In The Employment Impact of Technological Change, Appendix Volume II Technology and the American Economy, Studies Prepared for the National Commission on Technology, Automation, and Economic Progress, Washington, U. S. Government Printing Office, February 1966, pp.203-221.
KEY WORDS: Adjustments; Macro, Micro, Skilled Workers, Skill Requirements, Job Content; Private Policy (Retraining, Skill Requirements), Public Policy (Manpower Programs, Education); Theoretical Discussion, Empirical (Tables); Footnotes (Moderate), Bibliography (None); Abstract.

ABSTRACT: Scope and Level -- A study of automation's effect on the nature of individual jobs and on the composition of the work force. Methodology -- A theoretical discussion of the effects of automation on skill level requirements. Major Conclusions -- The author concludes that, in general, greater levels of automation will not require greater skill levels for workers, although, in the maintenance area in particular, some upgrading will be necessary for some workers. He cautions against excessive education and skill specification where not needed because labor costs will rise improperly, disillusion and resentment will be created among workers, and valid job standards will be destroyed by setting standards that are not truly needed for a given task.

Manpower policies that will be appropriate to the full sweep of technological progress are needed. They should not focus on narrow aspects of the problem such as skill level requirements, alone.

TITLE: "Automation and White Collar Unionism"
AUTHOR: Thomas R. Brooks
PUBLISHER: *Dun's Review*, Vol.87, January 1966, pp.59-62.
KEY WORDS: Adjustments; Historical, White Collar Workers, Employment, Blue Collar-White Collar; Private Policy (White Collar Unionization); Descriptive (Past Trends, Ongoing Trends, Future Trends); Footnotes (None), Bibliography (None); No Abstract.

66:11.00

TITLE: "The Poverty and Unemployment Crisis"
AUTHOR: Walter Buckingham
PUBLISHER: In Statements Relating to the Impact of Technological Change, Appendix Volume VI, Technology and the American Economy, prepared for the National Commission on Technology, Automation and Economic Progress, Washington, U. S. Government Printing Office, February 1966, pp. 43-53.
KEY WORDS: Adjustments; Macro, Poverty, Employment, Unemployment, Sociological and Psychological Effects; Public Policy (Full Employment, Manpower Programs); Descriptive (Past Trends, Ongoing Trends); Footnotes (None), Bibliography (None); Abstract.
ABSTRACT: Scope and Level — A statement on poverty and unemployment, especially as they relate to technological change. Methodology — A discussion of poverty in the U.S. and the effects of unemployment on the poor. Major Conclusions — Unemployment and poverty are often interrelated and exert a causal effect on one another; the unemployed tend to be poor, and the poor are hardest hit by unemployment. Much unemployment is attributable to technological change and the poor bear the brunt of this. The author concludes that the U.S. must consider human values when considering technological change and in particular should be aware of its effect on the poor.

66:12.00

TITLE: Technological Trends in Major American Industries
AUTHOR: Bureau of Labor Statistics, U. S. Department of Labor
PUBLISHER: Bureau of Labor Statistics, Bulletin #1474, Washington, U.S. Government Printing Office, February 1966.
KEY WORDS: Adjustments; Micro, Case Studies, Employment, Collective Bargaining, Skill Requirements, Work Rules, Fringe Benefits, Job Security; Private Policy (Seniority, Relocation, Retraining, Severance Pay, Pension Rights, S.U.B., G.A.W., Attrition, Early Retirement, Pay Incentives, Layoff Notification, Apprenticeship, Innovation Timing, Overtime, Planning, Job Content, Vacations, Automation Fund, Skill Requirements); Public Policy (Manpower Programs, Counseling, Placement Service, Education); Empirical (Tables, Cases); Footnotes (None); Bibliography (Large); Abstract.
ABSTRACT: Scope and Level — A comprehensive study of technological trends and the consequent impact on employment in 36 major American industries. Methodology — The outlook for technology and markets, and manpower trends and adjustments are discussed for each major industry. Major Conclusion — Conclusions are drawn for each industry. In general the study concludes that all industries will be affected by automation, employment prospects are generally favorable, necessary skill levels will increase for jobs in many industries, and technical change is pervasive and underscores the importance of developing adequate plans to facilitate manpower adjustment.

66:13.00

TITLE: Evaluation of Changes in Skill-Profile and Job-Content Due to Technological Change; Methodology and Pilot Results From the Banking, Steel and Aerospace Industries

AUTHOR: California University. Human Factors in Technology Research Group

PUBLISHER: Berkeley, Department of Industrial Engineering and Operations Research, University of California, 1966.

KEY WORDS: Adjustments; Micro, Macro, Banking, Steel Industry, Aerospace Industry, Government, Employment, Skill Requirements, Job Content; Public Policy (Full Employment, Manpower Programs); Empirical (Variance-Covariance Analysis, Correlation, Tables, Sample, Cases); Footnotes (Few), Bibliography (Small); Abstract.

ABSTRACT: Scope and Level — An evaluation of changes in skill profile and job content due to technological change in the banking, steel, and aerospace industries. Methodology — A quantitative approach for studying manpower and skill in relation to technological change and for analytically forecasting employment by industry and skill level. Major Conclusions — The findings of this study in relation to policy implications are mainly negative. Skill levels will not change appreciably nor will the size of the labor force. Aggregate adjustments will not, in general, be necessary.

66:14.00

TITLE: "Economics of Technical Change"
AUTHOR: Ann P. Carter
PUBLISHER: Scientific American, Vol. 214, No. 4, April 1966, pp. 25-31.
KEY WORDS: Adjustments; Micro, Employment, Skill Requirements; Empirical (Input-Output); Footnotes (None), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — An input-output analysis of the effects of technological change. Methodology — A comparison of input-output tables listing the transactions among all sectors of industry in the U.S. for the years 1947 and 1958. Major Conclusions — A principal consequence of technological change is that diverse major industries in the U.S. economy tend to become interlocked in increasing interdependence. In the job market there is a declining demand for people in the "productive" functions, as traditionally defined, and increasing demand for people who can contribute to the coordinative and integrative functions required by the larger and more complex system.

66:15.00

TITLE: "The Cybercultural Revolution and the American Dream"
AUTHOR: Robert T. Christen
PUBLISHER: In Alice Mary Hilton, ed., The Evolving Society, Proceedings of the First Annual Conference on the Cybercultural Revolution - Cybernetics and Automation, New York, The Institute for Cybercultural Research, 1966, pp. 347-356.
KEY WORDS: Adjustments; Historical, Income Maintenance, Employment; Public Policy (Income Maintenance); Descriptive (Past Trends, Future Trends); Footnotes (None), Bibliography (None); Abstract.
ABSTRACT: Scope and Level — A brief discussion of the historical precedent for a guaranteed annual income. Methodology — Statements made by prominent Americans throughout the history of the U. S. relating to the rights of every American to make a living wage are examined. Major Conclusion — A historical precedent has been set for this guaranteeing each American the means to earn a living wage. Examples of this are the Homestead Act and the Employment Act of 1946. The author concludes that in an age of cybernation a guaranteed income is analogous to free land in the 1800's or government promotion of full employment in the mid 1900's and thus follows in the American tradition.

66:16.00

TITLE: "Political Implications of Technology and Social Change"
AUTHOR: Joseph S. Clark
PUBLISHER: In Dean Morse and Aaron W. Warner, eds., *Technological Innovation and Society*, edited for the Columbia University Seminar on Technology and Social Change. New York, Columbia University Press, 1966, pp. 184-214.
KEY WORDS: Adjustments; Macro, Economic Growth, Unemployment; Public Policy (Full Employment, Fiscal Policy, Planning, Manpower Programs, Legislation, Education); Theoretical Discussion; Footnotes (None), Bibliography (None); Abstract.
ABSTRACT: *Scope and Level* — A discussion of political activity which can be undertaken to guide the direction of technological innovation and bring the economy to full employment. *Methodology* — A discussion of the impact of technological change upon the work force and upon public policy and pragmatic political action. *Major Conclusions* — A high rate of economic growth is essential for lowering unemployment rates. Community development represents one of the largest unmet areas of need in the nation and funds to apply new technology should be allocated to these areas. Creating jobs in these new areas will help alleviate unemployment resulting from the adoption of new technology in traditional productive enterprise.

66:17.00

TITLE: "Insight into Automation"
AUTHOR: Michael Clark
PUBLISHER: ILO Panorama, No. 20, September-October 1966, pp. 2-16.
KEY WORDS: Adjustments; General Equilibrium, Macro, Unemployment, Union-Management Powers, Blue Collar-White Collar, Skill Requirements, Work Rules, Education Requirements; Private Policy (Collective Bargaining, Layoff Notification, Skill Requirements), Public Policy (Unemployment Compensation, Manpower Programs, Education); Descriptive (Ongoing Trends, Cases); Footnotes (None), Bibliography (None); Abstract.
ABSTRACT: Scope and Level — A discussion of the impact of automation due to technological innovation on employment, working conditions and social responsibility for this change. Methodology — An analysis of how automation may affect the labor-capital ratio and the consequences on the labor structure. Major Conclusion — Automation brings practical benefits to both industrialized and developing countries. However, the affects of automation such as unemployment and changes in occupational requirements, give rise to fear and alarm.

66:18.00

TITLE: "The Impact of Changing Technology on Employment in Yugoslavia"
AUTHOR: Nikola Cobelijic
PUBLISHER: Chapter 10 in Jack Stieber, ed., Employment Problems of Automation and Advanced Technology, New York, St. Martin's Press, 1966, pp.183-196.
KEY WORDS: Adjustments; General Equilibrium, Macro, Yugoslavia, Agriculture, Occupational Structure, Hours of Work; Public Policy (Full Employment, Urban-Regional Policy, Minimum Wages, Shorter Work Week); Theoretical Discussion, Empirical (Tables, Sample); Footnotes (Moderate), Bibliography (None); No Abstract.

66:19.00

TITLE: "Technological Change - Past and Present"
AUTHOR: Clyde E. Dankert
PUBLISHER: In Statements Relating to the Impact of Technological Change, Appendix Volume VI, Technology and the American Economy, prepared for the National Commission on Technology, Automation, and Economic Progress, Washington, U. S. Government Printing Office, February 1966, pp. 67-78.
KEY WORDS: Adjustments; Macro, Historical, Wage Effects, Hours of Work, Labor Mobility; Public Policy (Full Employment, Public Employment Programs, Manpower Programs, Relocation, Minimum Wages, Shorter Work Week, Retirement); Review of the Literature, Descriptive (Past Trends, Future Trends); Footnotes (Moderate), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A historical investigation of the thought of economists and others on technological change and its effects. Methodology — The thought of economists and others on technological change throughout history are examined and lessons to be learned from their perceptions are put forth. Major Conclusions — When discussing technological change we should strive for a balanced view, neither too optomistic nor too gloomy. Price flexibility as a means for reducing the unemployment impact of technological innovation has been discussed historically and is worth considering in the future. Labor mobility, both geographical and occupational, is a traditional concern stemming from technological change and it is necessary to develop ways of smoothing resistance to mobility. A shorter work week or higher wages are each possible results from increased productivity resulting from technological innovation. The author concludes that policies increasing the growth rate and increasing labor mobility are more necessary than implementing proposals for shorter hours to spread the unemployment.

66:20.00

TITLE: "Technological Change and Manpower Policy - The Older Worker"
AUTHOR: John T. Dunlop
PUBLISHER: In Juanita Kreps, ed., Technology, Manpower, and Retirement Policy, Cleveland, World Publishing Co., 1966.
KEY WORDS: Adjustments; Macro, Older Workers, Employment, Labor Mobility, Job Content; Private Policy (Pension Rights, Early Retirement, Shorter Work Week, Work Sharing), Public Policy (Counseling, Manpower Programs, Relocation, Shorter Work Week, Retirement, Unemployment Compensation, Education); Theoretical Discussion; Footnotes (Few), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A discussion of the effects of changing technology on the employment patterns of the older worker. Methodology — Ways in which changing technology affects older workers are examined and some recommendations for alleviating problems are made. Major Conclusions — Changing job structure and content as a result of technological change presents two major problems to older workers: the rising levels of educational requirements for many jobs, and the personal and social costs of occupational and geographical movement.

Older workers are especially disadvantaged by a lack of formal education requisite for changing jobs. Tighter labor markets, better vocational measures of job qualities as substitutes for formal education, and improved on-the-job training are necessary for helping older workers adjust.

Adequate pension plans which go with the worker if he changes jobs are essential. Early retirement, combined with counseling remains a flexible option for some workers.

Continuing education for all workers is necessary to facilitate adjustment to the rapidly changing world. More flexible work arrangements - shorter hours, job sharing, reduced work years - are needed for older workers.

66:21.00

TITLE: "Perspectives on Employment under Technological Change"
AUTHOR: Otto Eckstein
PUBLISHER: Chapter 6 in Jack Stieber, ed., *Employment Problems of Automation and Advanced Technology*, New York, St. Martin's Press, 1966, pp.86-104.
KEY WORDS: Adjustments; Macro, Young Workers, Unskilled Workers, Semi-Skilled Workers, Skilled Workers, Blacks, Employment, Skill Requirements; Public Policy (Full Employment, Urban-Regional Policy, Manpower Programs); Theoretical Discussion, Empirical (Tables, Sample), Descriptive (Ongoing Trends); Footnotes (Few), Bibliography (None); No Abstract.

66:22.00

TITLE: "The Problems of Consent for Change: The Fowley Refinery Case"
AUTHOR: Allan Flanders
PUBLISHER: Chapter 21 in Jack Stieber, ed., Employment Problems of Automation and Advanced Technology, New York, St. Martin's Press, 1966, pp.394-409.
KEY WORDS: Adjustments; Micro, Great Britain, Case Study, Oil Industry, Collective Bargaining, Union-Management Powers, Work Rules, Hours of Work, Earnings; Private Policy (Overtime, Pay Incentives, Job Content); Descriptive (Ongoing Trends); Footnotes (Few), Bibliography (None); No Abstract.

66:23.00

TITLE: "Implications of Technological Change for Jobs"
AUTHOR: Joseph N. Froomkin
PUBLISHER: In Juanita Kreps, ed. Technology, Manpower and Retirement Policy, Cleveland, World Publishing Company, 1966, pp. 157-166.
KEY WORDS: Adjustments; Macro, Micro, Older Workers, Employment, Unemployment, Wage Effects; Private Policy (Retraining, Pension Rights, Early Retirement, Job Security, Work Sharing, Vacations, Skill Requirements), Public Policy (Full Employment, Education); Empirical (Tables); Footnotes (Few), Bibliography (None); No Abstract.

66:23.50

TITLE: "Personnel Administration and Rationalization"
AUTHOR: Yoshio Fukase
PUBLISHER: in Kazuo Okochi and Yoshio Kneko, eds., Modern Labor Problems Seminar, Tokyo, Yuhikaku, 1966, pp. 241-268 (in Japanese)
KEY WORDS: Adjustments; Micro, Petrochemical Industry, Shipbuilding Industry, Japan, Wage Effects, Skill Requirements; Private Policy (Seniority, Retraining, Relocation, Shorter Work Week); Empirical (Cases); Footnotes (Moderate), Bibliography (Moderate); Abstract.

ABSTRACT: Scope and Level — An empirical analysis of automation and worker adjustments which took place in the Japanese petro-chemical and shipbuilding industries.

Methodology — Based on the past experience, a discussion of possible ways of minimizing worker lay off and workers' as well as unions' resistance to automation.

Major Conclusions — Automation, as a major device to improve the efficiency as well as the competitive power of enterprises, has not only greatly affected the laborer's occupational life but also the traditional system of labor management. Introduction of automation has created a demand for new types of technicians and workers. In the chemical industry, for example, there are both trained engineers who are able to read the graphic indicators at the central control room and control overall flows of production, and workers whose requirements are merely to maintain a normal operation of machineries. In contrast, in the old process a large number of skilled workers were not only able to maintain machinery but also able to control the flow of operations. Consequently a large number of these old skilled workers must be retrained in order to avoid laying them off. The above changes in the quality of the labor force have led to a reconsideration of the traditional life-time employment and the seniority wage system, and have introduced a new wage system based on the ability and efficiency of individual workers. Therefore, in order to avoid labor problems it is absolutely necessary to consult and obtain some agreement from labor unions concerning job transfer, working hours, the wage system and the welfare of retiring workers before automation is adopted by a firm. Previously, the change in production process was decided solely by the management. Also, the author shows some possible ways, such as increased job retraining by the firm and the firm's assistance in finding a job for the displaced workers, to alleviate the problems of technologically displaced workers.

66:24.00

TITLE: Structural Unemployment and Aggregate Demand, 1948-64
AUTHOR: Eleanor G. Gilpatrick
PUBLISHER: Baltimore, Maryland, Johns Hopkins Press, 1966.
KEY WORDS: Adjustments; Macro, Employment, Unemployment, Labor Mobility, Education Requirements, Labor Force Participation Rate; Public Policy (Full Employment, Manpower Programs); Empirical (Regression, Sample), Descriptive (Past Trends); Footnotes (Many), Bibliography (None); No Abstract.

66:24.50

TITLE: Conference on Unskilled Workers in the Labor Force: Problems and Prospects
AUTHOR: A. L. Gitlow, ed.
PUBLISHER: New York, New York University School of Business and the President's Committee on Employment of the Handicapped, 1966
KEY WORDS: Adjustments; Micro, Handicapped Workers, Unskilled, Employment, Skill Requirements; Private Policy (Retraining, Job Content); Descriptive (Ongoing Trends, Future Trends); Abstract.

ABSTRACT: Scope and Level — A conference concerned with problems and proposals relevant to the employment of workers of limited training and skill (particularly the mentally retarded) in the context of tight labor markets. Major Conclusions — The first speaker challenged the thesis that the mentally retarded could be helped in the future by programs designed to find employment for them in unskilled jobs. However, he observed that progress for the mentally retarded could come, to a meaningful degree, only out of programs designed to train them. He supported his points with the evidence that employment in unskilled jobs represented a declining proportion of the American labor force, and that the experience was good with respect to low drop-out rates during training and high continuance rates in jobs following the completion of training.

The second speaker agreed with the first, that training of the mentally retarded was both feasible and important, but maintained also that their placement in unskilled jobs was a meaningful and important effort. He presented major elements which could comprise an active approach to enlarging the employment of unskilled workers.

The last speaker focused on the point that a nation's well-being depended on its resources, both natural and human, with the human resources being more meaningful. He reviewed the characteristics of the mentally retarded which made them especially attractive employees, and suggested that every effort be made to use all the resources of the society.

66:25.00

TITLE: "The Comparative Experience With Retraining Programmes in the United States and Europe"
AUTHOR: Margaret S. Gordon
PUBLISHER: Chapter 14 in Jack Stieber, ed., Employment Problems of Automation and Advanced Technology, New York, St. Martin's Press, 1966, pp. 254-277.
KEY WORDS: Adjustments; Historical, General Equilibrium, United States, Western Europe, Great Britain, France, Sweden, West Germany, Italy, Belgium, Netherlands, Agriculture, Construction Industry, Manufacturing, Service Industry, Technical Occupations, Younger Workers, Older Workers, Women, Disadvantaged Workers, Employment; Public Policy (Full Employment, Manpower Programs); Empirical (Tables, Sample), Descriptive (Past Trends, Ongoing Trends); Footnotes (Moderate), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A comparison of public, institutionalized retraining programs in Western Europe and the United States for the period 1945–1963. Emphasizes the type of people served, the type of training given, and the results of the programs (e.g., placement and retention). Methodology — It is a descriptive analysis relying on government reports and statistics and on on-sight visits and interviews. Major Conclusions — Manpower retraining programs can be helpful in both tight and loose labor markets. If the U.S. would have had ongoing retraining programs during the 1950's, the 1958–1962 employment problems would have been reduced. The goals of retraining programs (increased national productivity vs. helping the disadvantaged) affect program placements. The relative tightness of the labor market affects program enrollments and placements.

European retraining programs emphasize different skill programs than the U.S. because of different occupational mixes and institutional settings. More emphasis is placed on manufacturing and construction related skills. Retraining includes vocational education for unskilled, retraining for those with obsolete skills, and refresher or adaptation courses for those with rusty skills or where technological change has made partial changes on job skills.

During the 1950's and early 1960's Europeans had full employment economies and tended to emphasize programs to increase worker efficiency and labor market adjustments in order to help maintain high growth rates. Most European countries attempt to accent the young males with higher potential for their programs; however, West Germany and Sweden have set up many programs for the disadvantaged as well. France was the only country having special programs to train technicians.

Placement tends to be very high (90% to 100%) in areas with tight labor markets and where training programs chiefly serve young males with high selection standards. Where programs have more concern for older workers, women, and disadvantaged and where there is somewhat less than full employment, the placement ratios are lower (70% or occasionally 50%).

66:26.00

TITLE: "Technological Change and Manpower Forecasts"
AUTHOR: Peter E. Haase
PUBLISHER: Industrial Relations, Vol.5, No.3, May 1966, pp.59-71.
KEY WORDS: Adjustments; Micro, Case Studies, Employment; Private Policy (Planning, Innovation Timing); Theoretical Discussion, Descriptive (Future Trends, Cases); Footnotes (None), Bibliography (None); No Abstract.

66:27.00

TITLE: "Labor Arbitration and Technological Innovation"
AUTHOR: Philip Harris
PUBLISHER: Labor Law Journal, Vol.17, November 1966, pp.664-670.
KEY WORDS: Adjustments; Micro, Case Studies, Union-Management Powers; Private Policy (Job Security, Collective Bargaining); Empirical (Cases); Footnotes (Few), Bibliography (None); No Abstract.

66:27.50

TITLE: "Reorganization of Employment Administration"
AUTHOR: H. Hasegawa
PUBLISHER: in Kazuo Okochi and Yoshio Kaneko, eds., Modern Labor Problems Seminar, Tokyo, Yuhikaku, 1966, pp. 123-149 (in Japanese)
KEY WORDS: Adjustments; Macro, Japan, Blue Collar-White Collar, Skill Requirements; Public Policy (Manpower Programs); Descriptive (Ongoing Trends); Footnotes (Moderate), Bibliography (Moderate); Abstract.

ABSTRACT: Scope and Level — An analysis of rationalization taken by Japanese firms during the 1950-1965 period and its impact on firms' personnel administration policy. Methodology — The rationalization especially introduction of technological change and its effect on employment, the quality of labor and the traditional Japanese type labor relations such as permanent employment and the seniority wage system are discussed. Major Conclusions — A polarization of skill level has taken place as a result of technological change for both blue collar and white collar workers. The demand for white collar workers tends to increase at a faster rate than the demand for blue collar workers. Also demand for high level professionals will increase and the present professionals need more knowledge to carry out their jobs. In the mean time, supervisors of production lines are less in demand as automation takes place. Technological change necessitated restructuring of the old personnel management system, especially the permanent employment and the seniority wage system. Under the capitalistic economy, the object of rationalization by private firms is to increase profit, hence we cannot expect the private sector to provide needed worker adjustments such as retraining.

A new trend in the employment policy in Japan is a shift from the private sector to the public sector, especially to the central government. Already, the public vocational training system has surpassed the private vocational system, and Employment Security offices activities have expanded rapidly to cover the problems generated by technological change. Based on the long term manpower supply-demand projection, the central government has a plan to control manpower requirements of each sector of the economy. We must beware of the danger of over-centralization of employment administration by the government.

66:28.00

TITLE: "Changes in the Skill Requirements of Occupations in Selected Industries"

AUTHOR: Morris A. Horowitz, and Irwin L. Herrnstadt

PUBLISHER: In The Employment Impact of Technological Change, Appendix Volume II, Technology and the American Economy, Studies Prepared for the National Commission on Technology, Automation, and Economic Progress, Washington, U.S. Government Printing Office, February 1966, pp. 223-287.

KEY WORDS: Adjustments; Micro, Meatpacking Industry, Rubber Tire Industry, Machine Shop, Banking, Health Services, Skill Requirements; Private Policy (Job Content, Retraining, Skill Requirements); Review of the Literature, Empirical (Tables, Case Studies); Footnotes (Moderate), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A study of the impact of automation and technological change on the content and skill requirements of specific occupations in selected industries. Methodology — An analysis of the changes from 1949 to 1965 in work content and in traits and preparation required of workers in five industries (meatpacking, rubber tires, machine shop trades, banking, and medical services) selected in as wide a range as possible in the hope that conclusions may be applicable to American industry as a whole. Major Conclusions — The overall or net change in the skill level requirements of occupations in the industries studied was remarkably small. There was considerable change in various abilities needed for individual occupations in an industry but these offset each other and the net change in overall skill levels was small.

66:29.00

TITLE: Productivity and Automation
AUTHOR: J. J. Jehring, ed., Henryka Chwalek, William E. Dunwiddie, Omar Kussow, John New House, contributors
PUBLISHER: Washington, National Council for the Social Studies, 1966.
KEY WORDS: Adjustments; Macro, Micro, Management Practices, Employment, Skill Requirements, Fringe Benefits; Private Policy (Retraining, Attrition, Job Security, Shorter Work Week, White Collar Unionization, G.A.W., Skill Requirements), Public Policy (Manpower Programs, Unemployment Compensation, Legislation); Descriptive (Ongoing Trends, Future Trends); Footnotes (None), Bibliography (Medium, Annotated); Abstract.

ABSTRACT: Scope and Level — A discussion of productivity and automation for high school use. Methodology — Terms and concepts relating to automation and productivity are defined, cases are discussed, and possibilities for future action are presented. Major Conclusions — Increased productivity resulting from automation necessitates adjustment to change on the part of labor and management. Adjustment is not easy and requires effort on the part of both parties and creative solutions to problems which arise.

66:30.00

TITLE: Automation and Technology in Education
AGENCY: Joint Economic Committee, Subcommittee on Economic Progress, Congress of the United States
PUBLISHER: Washington, U. S. Government Printing Office, 1966
KEY WORDS: Adjustments; Macro, Education Requirements; Public Policy (Education, Information); Descriptive (Ongoing Trends); Footnotes (None), Bibliography (None); No Abstract.

66:31.00

TITLE: "Main Problems of Raising Workers' Skills Under Conditions of Intensive Technical Progress"
AUTHOR: A. I. Katsenelinboigen
PUBLISHER: in G. V. Osipov, ed., Industry and Labour in the U.S.S.R., London, Tavistock Publications, 1966, pp.207-222.
KEY WORDS: Adjustments; Micro, Macro, U.S.S.R., Skill Requirements; Private Policy (Work Sharing, Retraining), Public Policy (Manpower Programs, Education, Planning); Descriptive (Ongoing Trends, Future Trends); Footnotes (Few), Bibliography (None); No Abstract.

66:32.00

TITLE: "The Changing Patterns of Collective Bargaining in the United States"

AUTHOR: Theodore W. Kheel

PUBLISHER: Chapter 20 in Jack Stieber, ed., Employment Problems of Automation and Advanced Technology, New York, St. Martin's Press, 1966

KEY WORDS: Adjustments; Macro, Low Skilled Workers, Young Workers, Blacks, Unions, Collective Bargaining, Blue Collar-White Collar, Skill Requirements; Private Policy (Work Rules, Shorter Work Week, Attrition, White Collar Unionization, Layoff Notification, Early Retirement, Relocation, Severance Pay, S.U.B., Pension Rights, Retraining, Apprenticeship); Descriptive (Ongoing Trends); Footnotes (Moderate), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A discussion of the impact of automation on the institutions of collective bargaining and unionization at an aggregate or generalized level while citing case examples. Methodology — A speculative or descriptive discussion of recent, past, and ongoing trends in collective bargaining in reaction to automation. Main Conclusions — Automation is dramatically affecting collective bargaining; (1) by creating a clash between productivity growth and job protection, and (2) by causing a decline in the relative size and strength of unions. This effect on unions is generated by automation impacting heavily on employment in unionized sectors and by increasing unemployment and white collar employment. Those most seriously hurt are the unskilled and semi-skilled, especially young people and blacks with poor education and training. Moreover, the problem cannot be solved solely in the private sector. National policy must deal directly with the problem.

Automation has reduced union power by (1) reducing the importance of a strike since non-union supervisory personnel can keep an automated plant running easier, and (2) increasing employee fears about job loss especially due to shifting of plant site. The author cites reduced wage settlements of the late 1950's and early 1960's as evidence here but doesn't mention the effect of the recession.

While organized labor has at times responded to automation with featherbedding techniques, this is not the general scheme since (1) society resents that approach, and (2) many unions advocate automation to reduce drudgery and increase incomes. Organized labor has reacted by seeking in many cases a shorter work week and in general by accepting attrition agreements to modify the impact of technology on jobs. Attrition hurts organized labor by reducing the number of workers involved. Also attrition creates no new jobs for the young. Unionization is developing in white collar jobs as technology creates a larger work force in this group. A list of private union-management approaches to adjusting to change includes; (1) advanced notice of layoffs, (2) methods of avoiding layoffs, such as, attrition, early retirement, transfer, relocation allowances, (3) easing unemployment problems such as, severance pay, supplemental unemployment benefits, vesting of pension rights, and (4) helping with new employment such as placement and referral, training, and apprenticeship.

66:33.00

TITLE: "Report of President's National Commission on Technology, Automation and Economic Progress"
AUTHOR: Benjamin S. Kirsh
PUBLISHER: Personnel Journal, Vol. 45, April 1966, pp. 232-236.
KEY WORDS: Adjustments; Macro, General Equilibrium, Unemployment, Work Rules, Wage Effects, Hours of Work, Collective Bargaining, Labor Mobility; Private Policy (Relocation, Job Security, Pension Rights), Public Policy (Full Employment, Monetary Policy, Fiscal Policy, Manpower Programs, Placement Service, Information, Counseling, Income Maintenance, Education); Empirical. Descriptive (Futurist Views); Footnotes (None), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — This study is an attempt to determine factual situations concerning the interaction of technology, automation, and economic growth; and, to suggest some possible solutions to the problems they present. Methodology — The report is an analysis of the technological effects on employment. It is supplemented by extensive documents, including studies by experts at the request of the commission, and by statements of interested persons. Major Conclusions — The report transcends what was ordinarily conceived of as automation problems. Finalized, it would be a blueprint for the minimization of unemployment.

Several features of the commission's report require special notice. 1. The commission found that in the next ten years the technological changes will be less rapid than the increase in demand for goods and services. 2. Confidence is expressed in the social imagination and ingenuity of American industry, labor and government in adjusting the economic organization to stave off unemployment and its consequent disturbances.

The report is a source of valuable instruction about our country's present economic and industrial setting.

66:34.00

TITLE: "The Future Society"
AUTHOR: Irving F. Laucks
PUBLISHER: in Alice Mary Hilton, ed., The Evolving Society, Proceedings of the First Annual Conference on the Cybercultural Revolution - Cybernetics and Automation, New York, The Institute for Cybercultural Research, 1966, pp. 341-346.
KEY WORDS: Adjustments; Macro, Unemployment; Public Policy (Education); Descriptive (Futurist Views); Footnotes (None); Bibliography (None); Abstract.
ABSTRACT: Scope and Level — A brief discussion of how problems of unemployment caused by cybernation may be solved. Methodology — The author speculates on solutions to permanent decreased manpower needs. Major Conclusion — Assuming that man will be assured a decent living, whether or not he is employed, he must be saved from boredom. This can be accomplished through education not directed towards just making a living, but rather towards stimulating his curiosity to explore his universe.

66:35.00

TITLE: "Cybernation and Job Security"
AUTHOR: Garth L. Mangum
PUBLISHER: Labor Law Journal, Vol. 7, No. 1, January 1966, pp. 18-25.
KEY WORDS: Adjustments; Micro, Macro, Case Studies, Employment, Collective Bargaining; Private Policy (Job Security, Work Rules, Retraining), Public Policy (Full Employment, Economic Growth, Relocation, Placement Service, Manpower Programs, Education); Theoretical Discussion; Footnotes (Few), Bibliography (None); Abstract.
ABSTRACT: Scope and Level — A discussion of the causes of job displacement and of the amount attributable to technological change. Methodology — Trends in employment, the satiation of demand, skill and education requirements, and the rate of displacement are described. Technological change by industry is presented and conclusions are drawn regarding the effects of technology on displacement and what can be done about it. Major Conclusion — The real culprit in job displacement has been the slowness of economic growth, not automation. To have great job security, there must be a total commitment to full employment at the public policy level.

66:36.00

TITLE: "Manpower Requirements and the Supply of Labor"
AUTHOR: Garth L. Mangum
PUBLISHER: in Juanita Kreps, ed., Technology, Manpower and Retirement Policy, Cleveland, New York, World Publishing Co., 1966, pp.27-33.
KEY WORDS: Adjustments; Macro, Government, Employment; Public Policy (Full Employment, Fiscal Policy, Monetary Policy, Public Employment Programs); Theoretical Discussion; Footnotes (Few), Bibliography (None); No Abstract.

66:37.00

TITLE: "The Effects of the Rationalization of Clerical Work on the Attitudes and Behaviour of Employees"
AUTHOR: Claudine Marenco
PUBLISHER: Chapter 22 in Jack Stieber, ed., Employment Problems of Automation and Advanced Technology, New York, St. Martin's Press, 1966, pp. 412-429.
KEY WORDS: Adjustments; Micro, France, Case Studies, Banking, Insurance Industry, Unskilled Workers, Semi-Skilled Workers, Clerical Workers, Skilled Workers, Computer Programmers, Work Relationships, Job Satisfaction; Descriptive (Ongoing Trends); Footnotes (Few), Bibliography (None); No Abstract.

66:38.00

TITLE: "Implications of Technological Change for Income"
AUTHOR: Ida C. Merriam
PUBLISHER: in Juanita Kreps, ed., Technology, Manpower, and Retirement Policy, Cleveland, New York, World Publishing Co., 1966, pp.166-175
KEY WORDS: Adjustments; Macro, Older Workers, Employment, Wage Effects; Private Policy (Early Retirement, Pension Rights), Public Policy (Income Maintenance, Retirement); Theoretical Discussion; Footnotes (None), Bibliography (None); No Abstract.

66:39.00

TITLE: Men, Machines, and Modern Times
AUTHOR: Elting E. Morison
PUBLISHER: Cambridge, Massachusetts, The MIT Press, 1966.
KEY WORDS: Adjustments; Historical, 19th Century, Working Conditions, Alienation of Workers; Public Policy (Planning); Theoretical Discussion, Descriptive (Past Trends, Future Trends); Footnotes (None), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A discussion of adaptation to invention in the 19th century with implications for adjustment to technological change in the 20th century. Methodology — Cases are cited of new inventions in the 19th century and how people reacted to them. By studying how people were introduced to change and coped with it, implications for present day adjustment to change are made. Major Conclusions — As man creates a new environment for himself he must learn to accomodate to it. In order to do this successfully alienation must be minimized. Culture, as well as environment, is changing as a result of technological innovation. The most important kind of invention in the future lies not in the mechanical realm but in the way we are able to deal with all the new conditions produced by the new machines and ideas. Rather than having all change decreed from above by government or big business or whatever, a mood and means must be created that will enable the members of the society to explore new instruments and new procedures, by designed experiments, while pondering alternatives and reserving judgement until the returns are in.

The object of the study was to take the measure of what man is in the new environment he has created for himself and to give him the evidence necessary to modify, limit, and organize the developing environment so that he may extend his own range within it.

TITLE: "Our Concept of Economy: Waste or Abundance?"
AUTHOR: Otto Nathan
PUBLISHER: in Alice Mary Hilton, ed., The Evolving Society, Proceedings of the First Annual Conference on the Cybercultural Revolution - Cybernatics and Automation, New York, The Institute for Cybercultural Research, 1966, pp. 267-274.
KEY RESEARCH: Adjustments; Macro, Socialism, Employment, Unions, Job Security; Public Policy (Full Employment, Fiscal Policy, Income Redistribution, Minimum Wages, Planning, Education, Nationalization, Foreign Trade Policy); Descriptive (Ongoing Trends, Future Trends); Footnotes (None), Bibliography (None); Abstract.
ABSTRACT: Scope and Level — A critique of our present economy and a socialistic solution to the problems it embodies. Methodology — A brief discussion of the shortcomings of our present economy, characterized by inequality, insecurity, and instability, and a description of the changes needed in the economy of the future. Major Conclusions — Cybernation necessitates comprehensive, centralized economic planning. It is necessary that we have (1) a goal of full employment, (2) income redistribution, (3) nationalization of very large industries, (4) an intelligent foreign trade policy, (5) many social improvements in housing, minimum wages, health insurance, etc., (6) revolutionary changes in education, and (7) a conscious labor movement. A socialist society is the way to ensure that these goals are met.

66:41.00

TITLE: Technology and the American Economy, Report of the National Commission on Technology, Automation and Economic Progress

AGENCY: National Commission on Technology, Automation, and Economic Progress

PUBLISHER: Washington, D. C., U. S. Government Printing Office, February 1966.

KEY WORDS: Adjustments; General Equilibrium, Micro, Macro, Government, Collective Bargaining, Employment, Unemployment, Private-Public Relations; Private Policy (Seniority, Retraining, Severance Pay, S.U.B., G.A.W., Attrition, Advance Notification, Shorter Work Week, Paygrades, Job Security, Layoff Notification, Pay Incentives, Innovation Timing, Skill Requirements), Public Policy (Full Employment, Monetary Policy, Fiscal Policy, Economic Growth, Urban-Regional Policy, Public Employment Programs, Information, Counseling, Manpower Programs, Retraining, Relocation, Placement Service, Minimum Wages, Shorter Work Week, Retirement, Unemployment Compensation, Income Maintenance, Public Representation in Bargaining, Legislation, Planning, Education); Theoretical Discussion, Empirical (Tables), Descriptive (Ongoing Trends, Future Trends); Footnotes (Few), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — The report of the Commission on Technology, Automation, and Economic Progress. Methodology — Major findings, conclusions, and recommendations of the commission are discussed. Dissenting opinions are included. Major Conclusions — The entire report is based on conclusions drawn from thework of the commission. Several broad conclusions stand out, however. Continued use of fiscal and monetary policy to promote economic growth is essential. There is a need for some form of income maintenance program. Broader and more comprehensive education for everyone is necessary. Some form of nationwide job information system should be implemented. The private sector and government, as employer, must aid displaced workers through retraining, placement, and so on, and fringe benefit rights (seniority, vacation, etc.) must be protected. Planning, on the part of government and firms, is essential to successful adjustment to technological change. This planning should be directed toward assuring that the burden of change not be borne disproportionably by some individuals or in some areas of the country, but rather that it should be borne more equally by all. A policy of full employment is essential to this. Increased productivity resulting from technological progress should be used in the future for meeting human and community needs to improve the environment, health, and education of all people.

66:42.00

TITLE: The Report of the President's Commission on Automation - A Critique, Transcript of the Conference Board Workshop - Seminar on the Report of the National Commission on Technology, Automation, and Economic Progress Held at the Waldorf-Astoria, New York, New York, April 12, 1966.

AGENCY: National Industrial Conference Board

PUBLISHER: New York, National Industrial Conference Board, Public Affairs Conference Report Number 4, 1966.

KEY WORDS: Adjustments; Macro, Micro, Management Practices, Government, Employment; Private Policy (Innovation Type, Retraining, Planning), Public Policy (Full Employment, Monetary Policy, Fiscal Policy, Urban-Regional Policy, Public Employment Programs, Information, Manpower Programs, Relocation, Minimum Wages, Income Maintenance, Public Representation in Bargaining, Legislation, Planning, Education); Descriptive (Ongoing Trends, Future Trends); Footnotes (None), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A transcript of a conference held to discuss the report of the National Commission on Technology, Automation, and Economic Progress. Methodology — Members of the Commission, members of the National Industrial Conference Board, and guest panalists from management, labor and government discussed the report of the National Commission on Technology, Automation, and Economic Progress. Major Conclusions — The Commission was commended by nearly everyone for coming up with a cohesive report considering the diverse backgrounds and opinions of the participants. A major objection to the report was that it did not concentrate enough on the positive aspects of technology and on management's role in adopting the technology which resulted in benefits to society as a whole. Several participants felt that the Commission addressed itself too much to government's role in adjusting to technology and neglected the role of the private sector.

In general there was consensus that most findings of the Commission were worthwhile. Those especially favored were the necessity for better education for everyone, some form of minimum income maintenance for those who are unable to be gainfully employed and the need for sufficient planning toward full employment.

66:44.00

TITLE: In the Name of Science
AUTHOR: H. L. Nieburg
PUBLISHER: Chicago, Quadrangle Books, 1966.
KEY WORDS: Adjustments; General Equilibrium, Macro; Private-Public Relations; Private Policy (Innovation Type), Public Policy (Full Employment, Monetary Policy, Fiscal Policy); Descriptive (Past Trends, Ongoing Trends, Future Trends); Footnotes (Many), Bibliography, (None); Abstract.
ABSTRACT: Scope and Level — Selected chapters of the book deal with the effects of scientific and technological innovation, both public, in the form of government contracts, and private, on economic growth. Methodology — A discussion of the positive and negative features of research and development on the U.S. economy from both a domestic and international point of view. Major Conclusion — Science and technology are important to U.S. economic development but are overvalued in our culture and are not a panacea nor a solution to the need for real economic growth. Innovation alone will not ensure the fullest productive capacity and the greatest overall human wellbeing. We must be willing to plan more carefully and to realize the consequences of innovation on every segment of our society.

Chapters 4, Innovation and Economic Growth, 5, Entropy and Pump Priming, and 6, Science: Progress and Idealogy contain the major arguments about the effects of technological change upon the economy. The major focus of the entire book is scientific development, especially in space technology and defense, in the 1960's.

66:45.00

TITLE: Manpower Aspects of Automation and Technical Change
AUTHOR: Organization for Economic Cooperation and Development, European Conference
PUBLISHER: Paris, O.E.C.D., 1966.
KEY WORDS: Adjustments; Micro, Macro, Labor-Management, Government, Europe, Employment, Unemployment, Skill Requirements, Occupational Structure, Labor Mobility; Private Policy (Attrition, Retraining, Job Content, Paygrades, Skill Requirements), Public Policy (Manpower Programs, Education, Planning, Unemployment Compensation, Economic Growth, Vocational Education, Relocation); Theoretical Discussion, Empirical (Cases), Descriptive (Ongoing Trends, Future Trends); Footnotes (None), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A summary report of the OECD conference held in Zurich on manpower aspects of automation and technological change. Methodology — Viewpoints brought out at the conference are discussed and summarized. Major Conclusions — A high rate of economic growth is needed to prevent displacement caused by technological change from becoming permanent unemployment. Job content is changing because of technology, thus, new methods of job classification are needed as well as a basic reorganization of job and occupational structure. Broad basic education is essential for adjustment to change. Specific, vocational education will often be obsolete by the time training is completed. A more general education is necessary to give individuals the tools to retrain and adapt as it becomes necessary for them.

66:46.00

TITLE: "Differential Contributions of Various Means for Adjusting to Technological Change"

AUTHOR: Joseph A. Pichler

PUBLISHER: Industrial Relations Research Association, Proceedings of the Nineteenth Annual Winter Meeting, December 1966, pp. 323-332.

KEY WORDS: Adjustments; Micro, Case Studies, Armour and Company, Fort Worth, Texas, Sioux City, Iowa, Studebaker Company, South Bend, Indiana, Blacks, Older Workers, Skilled Workers, Unskilled Workers, Unemployment, Labor Mobility; Private Policy (Pension Rights, Transfer Options, Severance Pay, Retraining); Descriptive (Past Trends, Cases); Footnotes (Moderate), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A discussion of comprehensive shutdown provisions on worker adjustments assessing the contributions to the labor market of severance pay, training, and transfer. Also, the personal adjustment patterns of displaced workers and the costs (economic and noneconomic) of accepting each provision. Methodology — A descriptive analysis of the factors determining workers' choices among the shutdown provisions, the employment consequences of each provision, and the income expenditure adjustments. Major Conclusion — Acceptance of training showed a negative association with age and educational achievement. Acceptance of a transfer showed a flat distribution for men over thirty (this contradicts the hypothesis that acceptance of transfer would be negatively related to age probably due to the strong correlation found between transfer and seniority.). The relationship between skill and acceptance of training was as expected: unskilled men and those with skills not transferable across industry lines were more likely to train. The influence of race upon the choice to retrain or transfer found Negroes more likely to transfer due to the job security barriers in local labor market and the frustrations from discriminatory school barriers. The overall impression from income and expenditure adjustments and from secondary labor force data is that trainees made the greatest changes in living patterns. Although there were mobility problems, the transfer option appears to afford the most effective mechanism for adjustment to shutdown.

66:47.00

TITLE: "Cybernation and Civil Rights"
AUTHOR: Victor Poschkis
PUBLISHER: In Alice Mary Hilton, ed., The Evolving Society, Proceedings of the First Annual Conference on the Cybercultural Revolution - Cybernetics and Automation, New York, The Institute for Cybercultural Research, 1966, pp. 357-364.
KEY WORDS: Adjustments; Historical, Minority Group Workers, Employment, Skill Requirements; Private Policy (Seniority, Preferential Hiring), Public Policy (Education, Information, Planning, Legislation); Descriptive (Past Trends, Future Trends); Footnotes (None), Bibliography (None); Abstract.
ABSTRACT: Scope and Level — A brief discussion of the effects of cybernation on minority groups. Methodology — The impact of cybernation on non-white workers is described and solutions are considered. Major Conclusion — Because of seniority clauses and lack of education, non-whites will be the hardest hit by automation. To remedy this and ease tensions which could lead to violence, the author suggests preferential hiring policies, more education for non-white children, research into future employment needs, and legislation to prevent moonlighting, except in cases of dire necessity.

66:48.00

TITLE: "Technology and the Negro"
AUTHOR: M. T. Puryear
PUBLISHER: In Adjusting to Change, Appendix Volume III, Technology and the American Economy, Studies prepared for the National Commission on Technology Automation, and Economic Progress, February 1966, pp. 126-143.
KEY WORDS: Adjustments; Macro, Blacks, Discrimination, Employment, Unemployment, Skill Requirements, Blue Collar-White Collar; Private Policy (Relocation, Retraining, Apprenticeship, Skill Requirements), Public Policy (Public Employment Programs, Information, Counseling, Manpower Programs, Relocation, Placement, Planning, Education); Descriptive (Ongoing Trends, Future Trends); Footnotes (Few), Bibliography (None); Abstract.
ABSTRACT: Scope and Level — A study of the impact of automation and technology on the black worker. Methodology — The extent of the problems of the black worker in selected cities are discussed; the condition of blacks in American society is explored; recommendations are made. Major Conclusions — The plight of the black in American society is very bad and becoming worse. Unemployment is an acute problem. Some of the solutions recommended by the author are a public works program, a massive basic education program for adults, scholarships and educational assistance, a national home building program, broader support for Negro colleges, improved job recruiting, improved health facilities, and improved counseling programs and techniques.

66:49.00

TITLE: "Some Reflections on Robots"
AUTHOR: Leonard E. Read
PUBLISHER: The Freeman, Vol. 16, No. 8, August 1966, pp. 32-40.
KEY WORDS: Adjustments; Macro, Unemployment, Skill Requirements, Sociological and Psychological Effects, Job Satisfaction; Public Policy (Education, Shorter Work Week); Descriptive (Past Trends, Ongoing Trends); Footnotes (Few), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A discussion of ways in which automation frees man for a life hopefully better than the one he now has. Methodology — A discussion on how automation displaces a worker but in the same sense relieves man from toil. Major Conclusion — Findings indicate an increase in employment and an enrichment of the job's process as a result of automation. Problems of automation stem from imbalance between technological know-how and economic, political, and moral wisdom. Cultural growth is commensurate with growth in affluence. The individual may vegetate unless he realizes that the purpose of wealth is to release him from drudgery so he may vigorously pursue his own unique potentialities and aptitudes.

66:50.00

TITLE: "The Impact of Automation on American Unionism and Its Possible Consequences"

AUTHOR: Julius Rezler

PUBLISHER: in Statements Relating to the Impact of Technological Change, Appendix Volume VI, Technology and the American Economy, prepared for the National Commission on Technology, Automation, and Economic Progress, Washington, U. S. Government Printing Office, February 1966, pp. 253-259.

KEY WORDS: Adjustments; Micro, Macro, Unions, Collective Bargaining, Strike Effectiveness, Blue Collar-White Collar; Private Policy (White Collar Unionization, Job Content, Union Jurisdiction, Collective Bargaining); Theoretical Discussion; Footnotes (Moderate), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A discussion of the possible consequences of automation on American unionism. Methodology — Possible consequences of technological innovation on American unions are considered. Major Conclusions — Automation will tend to diminish the union movement as we now know it in America. White collar workers are becoming the largest share of the labor force and they are difficult to unionize. The absolute size of many unions is declining because of a decreased labor force resulting from technological change. Production facilities are being moved from industrial centers to rural areas where it is difficult to unionize workers. Job content is changing as a result of automation and this leads to jurisdictional disputes between unions. The strike, as a tactic employed by unions, is diminishing due to the fact that a skeleton crew of supervisors can keep many automated plants in operation during a strike.

66:51.00

TITLE: Automation, Manpower, and Education
AUTHOR: Jerry M. Rosenberg
PUBLISHER: New York, Random House, 1966.

KEY WORDS: Adjustments; Micro, Macro, Unskilled Workers, Semi-Skilled Workers, Nonwhite Workers, Older Workers, Younger Workers, Handicapped Workers, Unions, Skill Requirements, Employment, Unemployment. Job Satisfaction; Private Policy (Retraining, Relocation, Collective Bargaining, Early Retirement, Shorter Work Week), Public Policy (Manpower Programs, Shorter Work Week, Education); Descriptive (Ongoing Trends, Future Trends), Empirical (Tables); Footnotes (Moderate), Bibliography (Large); Abstract.

ABSTRACT: Scope and Level — A comprehensive study of ways in which education can help people adjust to technological change. Methodology — Effects of technological change on different categories of workers and methods for alleviating adjustment problems through education are discussed. Major Conclusions — Continuing life-long education will become necessary for all members of society. As skill levels are upgraded, all those who wish to be employed must constantly retrain themselves to cope with the new technology. This applies to every labor group, unskilled, semi-skilled, middle management, and professionals.

Broad education at all levels is essential to help people adapt to change throughout their lifetimes. Creativity and originality in people must be fostered because machines will take over the routine and commonplace. Since computers will be so much a part of everyday life, it is the responsibility of secondary schools to acquaint students with them so they know what the machines are and what they can do.

In general, education should be directed toward familiarizing students with automation and its effects so they will have an awareness of the phenomenon and be equipped to deal with it.

66:52.00

TITLE: Most Notorious Victory - Man in an Age of Automation
AUTHOR: Ben B. Seligman
PUBLISHER: New York, The Free Press, 1966.
KEY WORDS: Adjustments; General Equilibrium, Unemployment, Collective Bargaining, Blue Collar-White Collar, Skill Requirements, New Labor Force Entrants, Unions, Plant Shutdowns, Alienation of Workers, Sociological and Psychological Effects; Public Policy (Public Representation in Bargaining, Income Maintenance, Relocation, Public Employment Programs); Empirical (Cases), Descriptive (Ongoing Trends); Footnotes (Many), Bibliography (Large); Abstract.

ABSTRACT: Scope and Level — A macro analysis of the effect of technological innovation on people. It discusses the adverse effect of technology on varied industries, regions, and occupational groups. Methodology — An empirical study of specific cases with discussions of ongoing trends. Main Conclusion — Technological innovation has caused sincere concern about the possible effects on the worker. Loss of jobs, employment, plant shutdowns are all a result of technology. Any further innovation demands redesign of plants which means further mechanization and as a result more displaced skilled workers. The big question is whether or not the economy can absorb these displaced job seekers. Loss of a job can have serious effects on the worker. Because of loss of face, he suffers deterioration of mental health and possibly an intensification of a sense of alienation. Job creating techniques, negative income tax, guaranteed annual income, and income maintenance were some of the ideas discussed to help the worker and stabilize the economy. The main idea of this book is that technological advance does have an adverse affect on the worker. Unless we are aware of this effect and develop ways of combating it, the effect will be overwhelming on the workers and the economy.

66:53.00

TITLE: "The Social Cost of Cybernation"
AUTHOR: Ben B. Seligman
PUBLISHER: in Alice Mary Hilton, ed., The Evolving Society, Proceedings of the First Annual Conference on the Cybercultural Revolution - Cybernetics and Automation, New York, The Institute for Cybercultural Research, 1966, pp.159-166.
KEY WORDS: Adjustments; Historical, Unemployment; Public Policy (Planning); Descriptive (Ongoing Trends, Future Trends); Footnotes (None), Bibliography (None); No Abstract.

A doomsday approach to automation. A mass society in which individual uniqueness cannot survive is approaching.

TITLE: "Retraining for Technological Change"
AUTHOR: W. Douglas Seymour
PUBLISHER: Personnel Management, Vol. 48, December 1966, pp. 183-190.
KEY WORDS: Adjustments; Macro, Historical, Case Study, Unions, Employment, Labor Mobility, Work Rules; Private Policy (Retraining, Planning, Job Security), Public Policy (Public Employment Programs, Manpower Programs, Education); Descriptive (Ongoing Trends), Empirical (Cases); Footnotes (Few), Bibliography (Small); Abstract.

ABSTRACT: Scope and Level — An attempt to describe and exemplify methods of retraining workers whose jobs undergo technological change and to illustrate ways in which reluctance has been overcome and co-operation achieved. Methodology — The paper discusses current economic reasons for job change; social and psychological factors in job change; procedures in job retraining; and finally case studies of job changes with emphasis on difficulties and results achieved. Major Conclusion — Can people become more changeable? Does change facilitate further change? The conclusion seems to be that people can change and can accept change. The industrial world and the industrial worker have come to accept change although this acceptance has been reluctant.

TITLE: "Implications of Technological Change for Leisure"

AUTHOR: Harold L. Sheppard

PUBLISHER: in Juanita Kreps, ed., *Technology, Manpower, and Retirement Policy*, Cleveland, World Publishing Co., 1966, pp. 157-166.

KEY WORDS: Adjustments; Macro, Older Workers, Leisure, Employment, Unemployment, Work Time, Hours of Work, Job Satisfaction; Private Policy (Shorter Work Week, Vacations), Public Policy (Full Employment, Monetary Policy, Fiscal Policy, Urban-Regional Policy, Public Employment Programs, Shorter Work Week, Retirement); Descriptive (Ongoing Trends, Future Trends); Footnotes (Few), Bibliography (None); Abstract.

ABSTRACT: *Scope and Level* — A discussion of increased leisure time resulting from productivity increases as a result of technological change. *Methodology* — A discussion of leisure and ways to make use of it. *Major Conclusions* — Job satisfaction has a lot to do with the need for increased leisure and the way leisure time is spent. Those who are satisfied with their work need leisure time less than those who do not like their jobs. Those who spend their non-working hours in creative or community pursuits are more satisfied with their leisure time.

As people gain more leisure time, channels should be provided by the community and government to direct their energies toward worthwhile goals, such as community service and participation in politics.

66:56.00

TITLE: The Myths of Automation
AUTHOR: Charles Silberman
PUBLISHER: New York, Harper and Row, 1966.
KEY WORDS: Adjustments; Macro, General Equilibrium, Historical, Employment, Blue Collar-White Collar, Labor Mobility, Private-Public Relations; Private Policy (Early Retirement, Retraining, Relocation, Innovation Timing, Job Content), Public Policy (Full Employment, Manpower Programs, Economic Growth, Planning, Public Representation in Bargaining); Descriptive (Ongoing Trends), Empirical (Tables); Footnotes (None), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — The book is a series of seven articles reprinted substantially as they appeared in Fortune Magazine from January 1965 to May 1966. Methodology — The articles combine into a study of how automation and new technology affect the labor market and, through it, American society and culture. Major Conclusions — Automation is not a significant cause of unemployment, because there isn't much automation. The author feels that the amount of automation already in place and the rate at which it is likely to grow, have been wildly exaggerated by social commentators who confuse the issue. The myth makers consequently fail to distinguish scientific possibility from economic reality.

New technology is exerting far less impact than had been assumed on the kinds of work men do and the amount of education and skill they need to do it. The long run trend is away from manual labor and toward mind work. However, the change is slow and gradual. In the short run, the rate of economic growth determines the industrial and occupational distribution of the jobs that are available as well as their total number.

66:57.00

TITLE: "Labour Mobility in Advanced Technological Societies"
AUTHOR: J. H. Smith
PUBLISHER: Chapter 15 in Jack Stieber, ed., *Employment Problems of Automation and Advanced Technology*, New York, St. Martin's Press, 1966, pp.278-294.
KEY WORDS: Adjustments; General Equilibrium, Occupational Structure, Labor Mobility, Private-Public Relations; Empirical (Tables), Descriptive (Ongoing Trends); Footnotes (Moderate), Bibliography (None); No Abstract.

66:58.00

TITLE: "An Evaluation of the Report of the National Commission on Technology, Automation and Economic Progress"

AUTHOR: Herbert E. Stiner

PUBLISHER: Industrial Relations Research Association, Proceedings of the Annual Meeting, Vol. 19, December 1966, pp. 24-33.

KEY WORDS: Adjustments; General Equilibrium, Macro, Unemployment, Skill Requirements, Private-Public Relations; Private Policy (Innovation Timing, Innovation Type, Job Content, Skill Requirements), Public Policy (Full Employment, Fiscal Policy, Manpower Forecasting); Descriptive (Ongoing Trends), Empirical (Input-Output, Cases); Footnotes (Few), Bibliography (Small); Abstract.

ABSTRACT: Scope and Level — The paper is a critical evaluation and analysis of *Technology and the American Economy*, National Commission on Technology, Automation, and American Progress, February 1966. Methodology — This paper is concerned primarily with (1) Commission assumptions which underlie the report, and (2) data and methodology used in the conduct of the research effort. Major Conclusions — The author feels that the commission is in no position to really deal with the assigned problem. The effects of technological innovation on employment are a micro phenomenon to be treated at the industry level and not a macro phenomenon to be treated at the national level.

If we are to understand, measure and develop programs to alleviate social and economic effects of technology we must: (1) have effective programs of manpower utilization to minimize the undesirable effects of technology; (2) develop a new perspective of planning for a time period of 3-5 years; and (3) conduct studies of innovations so as to be aware of changes and stages of change of technology.

The greatest contribution of the commission is to point out deficiencies in our current efforts to understand and deal with problems growing out of technological change.

66:59.00

TITLE: "Training in the Perspective of Technological Change"
AUTHOR: Herbert E. Stiner
PUBLISHER: U. S. Department of Labor, Seminar on Manpower Policy and Programs, January 1966.
KEY WORDS: Adjustments; General Equilibrium, Macro, Private-Public Relations; Private Policy (Retraining), Public Policy (Manpower Programs, Education); Descriptive (Ongoing Trends, Futurist Views); Footnotes (None), Bibliography (None); No Abstract.

66:60.00

TITLE: "Manpower Implications of Process Control Computers in the Process Industries"

AUTHOR: Thomas M. Stout

PUBLISHER: In *The Outlook for Technological Change and Employment*, Appendix Volume I, *Technology and the American Economy*, Studies prepared for the National Commission on Technology, Automation, and Economic Progress, Washington, U. S. Government Printing Office, February 1966, pp. 253-289.

KEY WORDS: Adjustments; Micro, Computers, Employment, Skilled Workers, Unemployment; Private Policy (Skill Requirements); Empirical (Tables, Sample); Footnotes (None), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A discussion of the use of process control computers in the process industries and the effects of this use on manpower requirements. Methodology — Process control and the use of the computer in process control are discussed, followed by a study of the effect the use of the computer has had on manpower requirements in selected industries. Major Conclusions — In general, overall manpower requirements have not been substantially reduced in the industries examined because of the introduction of computers for process control. Some workers are displaced by computer use but some additional skilled workers are needed to install, program, and operate the computer.

TITLE: "Automation Commission's Report on Technological Development"
AGENCY: U. S. Department of Labor
PUBLISHER: Monthly Labor Review, Vol.89, No.3, March 1966, pp.274-277.
KEY WORDS: Adjustments; General Equilibrium, Micro, Macro, Government, Employment, Private-Public Relations; Private Policy (Retraining, Pension Rights, Shorter Work Week), Public Policy (Full Employment, Monetary Policy, Fiscal Policy, Urban-Regional Policy, Public Employment Programs, Information, Counseling, Manpower Programs, Relocation, Minimum Wages, Shorter Work Week, Retirement, Legislation, Planning, Education); Descriptive (Ongoing Trends); Footnotes (None), Bibliography (None); No Abstract.

A brief summary of the major conclusions and recommendations of the National Commission on Technology, Automation, and Economic Progress.

66:62.00

TITLE: "Changing Character of Human Work Under the Impact of Technological Change"

AUTHOR: Charles R. Walker

PUBLISHER: in *Employment Impact of Technological Change*, Appendix Volume II, *Technology and the American Economy*, Studies prepared for the National Commission on Technology, Automation, and Economic Progress, Washington, U.S. Government Printing Office, February 1966, pp. 289-315.

KEY WORDS: Adjustments; Micro, Working Conditions, Case Study, Engineers, Management Practices, Private Policy (Innovation Timing, Skill Requirements, Job Content, Advance Notification, Planning); Public Policy (Planning, Education); Review of the Literature, Empirical (Cases), Descriptive (Ongoing Trends); Footnotes (Moderate), Bibliography (None); Abstract.

ABSTRACT: *Scope and Level* — A study of the ways in which automation and technological innovations affect conditions of work, and of solutions to problems which may arise. *Methodology* — Case studies of industries are described and studies in this area done by others are discussed to ascertain some of the changes in work environments and what has been done to help workers adapt to these new environments. *Major Conclusions* — Managers, engineers, and behavioral scientists have the responsibility to restructure work environments in the interest of greater quality and quantity of the product and in the interest of the basic human needs of men and women at work. Advance planning is essential to successful adjustment to new working conditions.

Not machines themselves but the ways they are designed, used or abused determine the quality of industrial society.

66:63.00

TITLE: "Collective Bargaining and the Challenge of Technological Change"
AUTHOR: Arnold R. Weber
PUBLISHER: In John H. G. Crispo, ed., Industrial Relations: Challenge and Responses, Toronto, University of Toronto Press, 1966, pp. 73-90.
KEY WORDS: Adjustments; Micro, Canada, U.S., Collective Bargaining, Leisure, Unions, Labor-Management, Strike Effectiveness; Private Policy (White Collar Unionization, Multicraft Unions, Labor-Management Cooperation, Shorter Work Week, Work Sharing, Attrition, Early Retirement, Transfer Options, Retraining); Descriptive (Ongoing Trends); Footnotes (None), Bibliography (None); Abstract.
ABSTRACT: Scope and Level — A brief discussion of methods used by unions and management for coping with technological change. Methodology — A description of present trends in the relationship between unions and management. Major Conclusions — Technological change has caused reductions in employment, shifts in industrial geographic location and changes in the structure of the labor force, especially for semi-skilled laborers relative to the professional and technical occupational groups. Current technological change has strengthened management's hand at the bargaining table. Union membership gains have lagged in the past few years. If any major breakthroughs are made by the trade union movement they will come in the expanding white-collar sector. The effectiveness of the strike is reduced by the company's ability to operate machines using supervisors and managerial personnel. This forces unions to consolidate their forces, to merge. There has also been changes in collective bargaining procedures such as the creation of the joint study committee. Out of a sense of realism few unions resist technological change outright. Management also recognizes the problems of transition.

There have been three general approaches adopted to deal with the consequences of automation: the buy-out approach, the gains-sharing approach, and the manpower-management approach. The buy-out attempts to temporarily satisfy labor but does not guarantee that labor will adjust to new jobs. Gain sharing promotes the interests of residual job holders. Manpower planning facilitates distribution of available employment opportunities. A combination of approaches has been employed in collective bargaining to handle the consequences of technological change.

66:64.00

TITLE: "Use of Investment Tax Credit to Facilitate Adjustment"
AUTHOR: Nat Weinberg
PUBLISHER: in Adjusting to Change, Appendix Volume III, Technology and the American Economy, Studies prepared for the National Commission on Technology, Automation and Economic Progress, Washington, U.S. Government Printing Office, February 1966, pp. 269-275.
KEY WORDS: Adjustments; Macro, Micro, Government, Management Practices, Employment, Unemployment; Private Policy (Seniority, Retraining, Relocation), Public Policy (Fiscal Policy, Capital Taxation); Theoretical Discussion; Footnotes (None), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A proposal for using the investment tax credit to facilitate adjustment to technological change. Methodology — A theoretical proposal for using a portion of a firm's investment tax credit for a fund to be held in reserve, for a period of 5 years, where it would be available to meet the needs of unemployment of that firm's employees resulting from technological change. Major Conclusions — A fund set aside from the investment tax credit for the purpose of helping displaced workers would be returned to the firm after a period of 5 years. This would encourage firms to minimize displacement since they would have a financial incentive to avoid displacement, to find alternative jobs for displaced employees, to retrain workers, and so on, in order to increase the amount of reserved funds which would be returned to the firm.

65:0.20

TITLE: "Governmental Restraints on Featherbedding"
AUTHOR: Benjamin Aaron
PUBLISHER: in Paul A. Weinstein, ed., Featherbedding and Technological Change, Boston, D. C. Heath and Company, 1965, pp. 79-107.
KEY WORDS: Adjustments; Historical, Macro, Unions, Collective Bargaining, Work Rules, Union-Management Powers, Private-Public Relations; Public Policy (Legislation, Public Representation in Bargaining); Review of the Literature, Descriptive (Past Trends, Ongoing Trends); Footnotes (Many), Bibliography (None); No Abstract.

65:0.50

TITLE: Jobs, Wages, and Changing Technology

AUTHOR: Robert L. Aronson

PUBLISHER: New York State School of Industrial and Labor Relations, Bulletin #55, Ithaca, New York, Cornell University, July 1965.

KEY WORDS: Adjustments; General Equilibruim, Micro, Unions, Management Practices, Skilled Workers, Low Skilled Workers, Employment, Collective Bargaining, Blue Collar-White Collar, Skill Requirements, Private-Public Relations, Work Rules, Work Relationships, Hours of Work, Occupational Structure; Private Policy (Attrition, Mediator, Job Security, Seniority, Relocation, Retraining, Severance Pay, Pension Rights, S.U.B., Shorter Work Week, Overtime, Early Retirement, Layoff Notification, Job Content), Public Policy (Full Employment, Information, Manpower Programs, Public Representation in Bargaining, Unemployment Compensation, Legislation), Empirical (Tables, Cases), Descriptive (Ongoing Trends); Footnotes (Few), Bibliography (Medium); Abstract.

ABSTRACT: Scope and Level — A discussion of the impact of technology on employment, collective bargaining, and adjustments at the individual firm level and on public-private sector relationships, and roles. Methodology -- The monograph discusses ongoing references to other studies. Major Conclusion -- The pace of technological change has not exceeded our present institutions ability to adjust to it. Private collective bargaining has been and will be able to handle by far the largest part of the adjustment activity but a broader social perspective is necessary. Technological change has changed the occupation mix but has not increased overall skill requirements in most cases.

Automation rarely radically changes occupational structures. In the mid 1960's. declining employment for the unskilled continued its long run trend. Inplant transfers and wider seniority units are more important than labor turnover in adjusting for technological change. Reduction of work hours and of overtime is seldom used. Severance pay and S.U.B. plans have helped those actually laid off. Early retirement and vesting of pension rights have increased attrition and provided better security for older workers who face additional burdens when laid off. For low skilled workers. retraining is the best answer. However, only the highly skilled jobs need extensive retraining. Unemployment attributable to technological change has been greatly lessened by phasing it in with labor turnover and by job reassignment.

Ratio of non-production workers has increased faster in plants experiencing more rapid technological change. Little change in skills required in production have occurred, mainly it has been a shift in proportions of different skills used. Increases in hiring standards may reflect general increase in educational attainment in society rather than increased technological demands.

Collective bargaining appears to be handling most adjustment problems, although the use of third party assistance is used in more difficult cases. Government action is needed to promote a full employment economy and to help those outside of collective bargaining. The need is for better information flows and skill development programs.

65:0.55

TITLE: "Perspective on Automation"
AUTHOR: Robert L. Aronson
PUBLISHER: International Labor Review Research, Vol. 10, No. 3, 1965, pp. 3-11.
KEY WORDS: Adjustments; Historical, Management Practices, Employment, Work Relationships, Skill Requirements, Job Satisfaction; Descriptive (Past Trends, Ongoing Trends, Future Trends); Abstract.

ABSTRACT: Scope and Level -- A discussion of the development and characteristics of automation and its relationship to industrial technology, and the impact of technological development on manpower adjustment. Methodology -- Throughout the analysis it is assumed that the terms of reference are labor-saving changes in industrial technology and the civilian sector of the economy. Two concepts of automation are developed: the "hardware approach" which involves new techniques and methods of machine and process control, and the "systems approach" which is concerned with the economics of business management and enterprise. The essence of the systems approach is to achieve optimum utilization of human and material resources, and to find both an organizational structure and methods of decision making which increase the efficiency of control in the organization.

Major Conclusion-- In his survey of recent technological trends, the author concludes that mechanization of processes and equipment appears to be the most characteristic pattern of technological advance. Other major findings: (a) automation increases the possibilities for a wider exercise of both intelligence and imagination in the design and construction of plant and equipment and of organization structure and decision making processes; (b) much of the postwar increases in productivity have been achieved by application of relatively conventional technologies; and (c) changes in manpower requirements and occupational relationships are, and will be, much more gradual than is popularly believed.

65:0.75

TITLE: "The Printers"
AUTHOR: George E. Barnett
PUBLISHER: In Paul A. Weinstein, ed., Featherbedding and Technological Change, Boston, D.C. Heath and Company, 1965, pp.34-42.
KEY WORDS: Adjustments; Historical, Micro, Case Study, Unions, Printers' Union, Work Rules; Private Policy (Work Rules); Descriptive (Past Trends); Footnotes (None), Bibliography (None); No Abstract.

65:1.00

TITLE: "Equity and Strategy in Union Retirement Policy"
AUTHOR: Melvin K. Bers
PUBLISHER: Industrial Relations, Vol. 4, No. 3, May 1965, pp. 39-45.
KEY WORDS: Adjustments; Micro, Unions, Typographical Union, United Auto Workers, Public Employees, Colorado, Older Workers, Employment, Union-Management Powers, Work Rules, Work Relationships, Work Time, Wage Effects; Private Policy (Seniority, Pension Rights, Early Retirement, Vacations, Job Content, S.U.B.), Public Policy (Minimum Wages, Shorter Work Week, Unemployment Compensation, Public Representation in Bargaining, Education); Descriptive (Past Trends, Ongoing Trends), Empirical (Cases); Footnotes (Few), Bibliography (Small); Abstract.

ABSTRACT: Scope and Level -- Although shifts in retirement policy may be changes to employment levels, they have created many internal tensions. This paper appraises those tensions and attempts to relate them to the broader aspects of union policy formation. Methodology -- A descriptive analysis of past and ongoing trends in retirement policy and the tensions related to new retirement programs. Major Conclusion-- New retirement programs have been drafted in the context of an economic emergency and there is no reason to believe that in the main outline they are but temporary measures. Internal union tensions over retirement policy have had transitional aspects and also permanent aspects. The integration of pension and retirement policy with other union programs must be worked out.

Tensions which are associated with new retirement programs arise primarily from policy issues relating to (1) forced, compulsory retirement, (2) the terms on which retirement is offered to the older worker, and (3) the choice between pension and other programs which perform similar functions. It will take experience before the union membership is able to digest the cost-benefit implications of new retirement programs. Then the union membership will make the adjustments most consistent with internal political reality.

TITLE: "Has Structural Unemployment Worsened?"
AUTHOR: Michael E. Borus
PUBLISHER: Industrial Relations, Vol.4, No.2, February 1965, pp.111-115.
KEY WORDS: Adjustments; Macro, General Equilibrium, Employment, Structural Unemployment, Private-Public Relations; Descriptive (Ongoing Trends, Case); Footnotes (Few), Bibliography (None); No Abstract.

65:3.00

TITLE: "Airline Flight Crews: Adjustment to Technological Change in a Regulated Growth Industry"
AUTHOR: Robert S. Bowers
PUBLISHER: Industrial Relations Research Association, Proceedings of the Annual Meeting, Vol. 18, December 1965, pp. 154-157.
KEY WORDS: Adjustment; Micro, Employment, Airline Industry, Collective Bargaining, Union-Management Powers, Work Rules, Work Relationships, Labor Mobility; Private Policy (Attrition, Early Retirement, Retraining, Relocation, Severance Pay, Pension Rights, Collective Bargaining), Public Policy (Information, Planning, Full Employment, Economic Growth); Empirical (Case); Footnotes (Few), Bibliography (Small); Abstract.
ABSTRACT: Scope and Level — A discussion of two other papers by Professors Warner and Kahn. Both papers are to be found in the *Industrial Relations Research Association, Proceedings of the Annual Meeting*, December 1965. Methodology — The paper analyzes the effects of technological change on the make-up of flight crews and ways in which the union-management relationship is attempting to overcome difficulties. Major Conclusions — Experience shows collective bargaining to be an effective instrument for working out direct and specific methods for charging some of the human costs of technological displacement against those who benefit from it. It does this by applying some of the gains from increased productivity to easing the adjustment process. Of course, private methods are facilitated by government policies of full employment and growth.

65:4.00

TITLE: Hearings Before the Commission on Manpower, Automation and Technology

AGENCY: California, Commission on Manpower, Automation and Technology

PUBLISHER: San Francisco, California, Commission on Manpower, Automation and Technology, 1965.

KEY WORDS: Adjustments; Macro, Micro, Minority Group Workers, Older Workers, Farm Workers, Younger Workers, Unions, Management Practices, Government, California, Employment, Unemployment; Private Policy (Seniority, Relocation, Retraining, Severance Pay, Work Rules, Pension Rights, S.U.B., G.A.W., Attrition, Early Retirement, Shorter Work Week, Vacations, Job Security, Labor-Management Cooperation, Planning, Layoff Notification, Apprenticeship, Skill Requirements), Public Policy (Full Employment, Monetary Policy, Fiscal Policy, Urban-Regional Policy, Public Employment Programs, Information, Counseling, Manpower Programs, Relocation, Placement Service, Minimum Wages, Income Maintenance, Shorter Work Week, Retirement, Unemployment Compensation, Public Representation in Bargaining, Legislation, Education); Theoretical Discussion, Descriptive (Ongoing Trends, Future Trends, Cases); Footnotes (None), Bibliography (None); Abstract.

ABSTRACT: Scope and Level -- A transcript of hearings conducted by the California Commission on Manpower, Automation and Technology. Methodology-- Representatives of labor, management, government, education, and the public reported on manpower, automation, and technology from the perspective of their expertise. Major Conclusion -- No conclusions were drawn by the group as a whole. Each participant drew his own conclusions depending on his area of interest and point of view.

65:5.00

TITLE: "Effects of Technological Change on Occupational Employment Patterns in the United States"
AUTHOR: Ewan Clague
PUBLISHER: *Manpower Implications of Automation*, Washington, U.S. Department of Labor, September 1965, pp. 29-38.
KEY WORDS: Adjustments; Macro, Employment, Unemployment, Skill Requirements; Public Policy (Manpower Programs, Education); Empirical (Tables); Footnotes (Few), Bibliography (None); No Abstract.

65:5.10

TITLE: "An Interdisciplinary Analysis of Job Enlargement: Technology, Costs, and Behavioral Implications"
AUTHOR: Eaton H. Conant and Maurice D. Kilbridge
PUBLISHER: Industrial and Labor Relations Review, Vol.18, No.3, April 1965, pp.377-395.
KEY WORDS: Adjustments; Micro, Case Study, Work Relationships; Private Policy (Retraining, Job Content); Empirical (Tables, Case); Footnotes (Few), Bibliography (None); No Abstract.

65:5.20

TITLE: "The Organized Musicians"
AUTHOR: Vern Countryman
PUBLISHER: in Paul A. Weinstein, ed., *Featherbedding and Technological Change*, Boston, D.C. Heath and Company, 1965, pp.20-33.
KEY WORDS: Adjustments; Historical, Micro, Case Study, Musicians' Union, Unions, Work Rules; Private Policy (Work Rules); Descriptive (Past Trends); Footnotes (Many), Bibliography (None); No Abstract.

65:5.30

TITLE: "Plant Bargaining in Steel: North East Case Studies"
AUTHOR: J. E. T. Eldridge
PUBLISHER: The Sociological Review, Vol.13, No.2, July 1965, pp.131-148.
KEY WORDS: Adjustments; Micro, Steel Industry, Great Britain, Collective Bargaining, Work Rules; Empirical (Cases); Footnotes (Few), Bibliography (None); No Abstract.

65:5.50

TITLE: "Is Protection Warranted"
AUTHOR: Emergency Board 151
PUBLISHER: in Paul A. Weinstein, ed., *Featherbedding and Technological Change*, Boston, D.C. Heath and Company, 1965, pp.121-129.
KEY WORDS: Adjustments; Micro, Railroad Industry, Case Study, Employment, Work Rules; Private Policy (Relocation, Retraining, Severance Pay, S.U.B., Attrition, Paygrades, Layoff Notification, Job Content); Descriptive (Past Trends, Ongoing Trends); Footnotes (None), Bibliography (None); No Abstract.

65:5.70

TITLE: "The Drift to Early Retirement"
AUTHOR: Edmund K. Faltermayer
PUBLISHER: Fortune, Vol. 71, May 1965, pp. 112-115.
KEY WORDS: Adjustments; Micro, Unions, Employment, Fringe Benefits, Private Policy (Retraining, Pension Rights, Attrition, Early Retirement); Empirical (Tables); Footnotes (None), Bibliography (None); Abstract.

ABSTRACT: Scope and Level -- A study of the trend toward early retirement in American industry. Methodology-- Early retirement plans in several industries are discussed. Major Conclusion -- Early retirement is becoming possible for more and more workers but, in general, they are not choosing to retire earlier.

65:6.00

TITLE: "Technological Change and the Older Worker: A Study of the Effects of Automation on Male Workers in the Printing Industry of Salt Lake County, Utah"
AUTHOR: Gerold Richard Gerber
PUBLISHER: unpublished M.S. Thesis, University of Utah, 1965.
KEY WORDS: Adjustments; Micro, Printing Industry, Salt Lake County, Utah, Older Workers, Job Satisfaction, Alienation of Workers; Review of the Literature, Theoretical Discussion, Empirical (Correlation, Tables, Sample); Footnotes (Moderate), Bibliography (Medium), Abstract.
ABSTRACT: Scope and Level -- A study of the effects of automation on the manual worker's feelings of alienation, job dissatisfaction, and status loss. Methodology -- By means of responses to questionnaires, attitudes of workers in non-automated companies are compared with workers in automated companies in regard to alienation, job dissatisfaction, and feeling of status loss. Older workers, 45 to 65 years of age, are compared with younger workers, 20 to 40 years of age, on the same variables. Major Conclusions -- Workers in automated companies, on the average, indicated greater alienation, job dissatisfaction, and loss of status than those in non-automated companies. There were no significant differences between older and younger workers except that older workers find their jobs more meaningful than younger workers. Older workers experience less alienation even in the automated companies.

65:6.30

TITLE: "The Work Rules and Work Practices Problem"
AUTHOR: William Gomberg
PUBLISHER: in Paul A. Weinstein, ed., Featherbedding and Technological Change, Boston, D.C. Heath and Company, 1965, pp. 109-121.
KEY WORDS: Adjustments; General Equilibrium, Unions, Employment, Collective Bargaining, Union-Management Powers, Work Rules; Private Policy (Work Rules, Pension Rights, S.U.B., Attrition, Early Retirement), Public Policy (Compulsary Bargaining, Public Representation in Bargaining); Descriptive (Past Trends, Ongoing Trends); Footnotes (Many), Bibliography (None); Abstract.

ABSTRACT: Scope and Level -- The article is a discussion of why a worker's job has been and is becoming viewed as a property right and how this affects collective bargaining concerning the impact of technology on employment. Methodology -- A description of past and recent trends, relying on several case studies, west coast longshoremen, railroads, and the 1959 steel strike, which demonstrate various attitudes and approaches taken by unions and management in adjusting to technological change. Major Conclusion -- The author's main argument is that the worker has a property right to a job and this must be accepted by management and the public in bargaining agreements. Unions to do their part must be flexible and not insist on just a make work (no employment change) or anti-technology solution.

Agreements establishing S.U.B. plans and early retirement along with normal attrition allow management to pursue more efficient production methods, permit higher pay for workers with higher productivity while giving workers income security, and still allow the national economy to grow and remain vigorous.

In order to insure this broader outlook by unions and management it may be necessary to have official public representation in collective bargaining or possibly compulsary arbitration. However, the author does not believe the latter approach to be benefical in most cases.

65:6.50

TITLE: "The Labor Force Adjustment of Workers Affected by Technological Change"
AUTHOR: Robert C. Goodwin
PUBLISHER: U.S. Department of Labor, Manpower Implications of Automation, Washington, D.C., U.S. Government Printing Office, September 1965, pp. 65-73.
KEY WORDS: Adjustments; Macro, Micro, Employment, Labor Mobility, Skill Requirements; Private Policy (Seniority, Relocation, Retraining, Advance Notification, Attrition, Planning, Layoff Notification), Public Policy (Full Employment, Monetary Policy, Fiscal Policy, Urban-Regional Policy, Information, Counseling, Manpower Programs, Relocation, Placement Service, Unemployment Compensation, Legislation, Planning, Education); Descriptive (Ongoing Trends); Footnotes (Few), Bibliography (None); Abstract.

ABSTRACT: Scope and Level -- A discussion of the labor force adjustment of workers affected by technological change. Methodology -- A description of several national programs which are a response to the problems surrounding labor force adjustment to technological change. Major Conclusion -- If there is sufficient effective demand for labor, existing programs of counseling and information can be effective in facilitating the adjustment of many displaced workers. However, a viable manpower agency must continually assess existing techniques and experiment with new adjustment techniques.

The Manpower Development and Training Act has been effective in retraining displaced workers and training young workers to decrease unemployment.

Advance notification of layoffs and cooperative planning on the part of the effected firm and the government is very effective in minimizing problems associated with plant closure.

Many programs and plans must be used simultaneously to meet the individual and community needs caused by displacement.

65:6.60

TITLE: "U. S. Manpower and Employment Policy: A Review Essay"
AUTHOR: Margaret S. Gordon
PUBLISHER: Berkeley, Institute of Industrial Relations, University of California, Reprint No. 249, 1965; Monthly Labor Review, Vol.87, No.11, November 1964.
KEY WORDS: Adjustments; Macro, Government, Employment, Unemployment; Public Policy (Full Employment, Fiscal Policy, Public Employment, Information, Manpower Programs, Relocation, Minimum Wages, Unemployment Compensation, Education); Review of the **Literature,** Descriptive (Future Trends); Footnotes (Few), Bibliography (None); No Abstract.

65:7.00

TITLE: "Technological Change, Productivity and Employment in the United States"
AUTHOR: Leon Greenberg
PUBLISHER: U. S. Department of Labor, Manpower Implications of Automation, Washington, U. S. Government Printing Office, September 1965, pp. 1-14.
KEY WORDS: Adjustments; Macro, Employment, Unemployment; Empirical (Regression, Correlation, Tables); Footnotes (Few), Bibliography (None); No Abstract.

65:8.50

TITLE: "The Problem of Using Manpower Released Due to Technical Progress"
AUTHOR: V. Iagodkin and I. Maslove
PUBLISHER: Problems of Economics, Vol.8, No.8, December 1965, pp. 26-33.
KEY WORDS: Adjustments; Macro, Socialism, U.S.S.R., Employment; Public Policy (Urban-Regional Policy, Manpower Programs, Relocation, Placement Service, Planning); Theoretical Discussion; Footnotes (Few), Bibliography (None); No Abstract.

65:9.00

TITLE: "A Tabulation of Case Studies on Technological Change"
AUTHOR: Internation Labor Office
PUBLISHER: Labor and Automation, Bulletin No. 2, Geneva, International Labor Office, 1965.
KEY WORDS: Adjustments; Case Studies; Descriptive (Cases); Footnotes (None), Bibliography (Large, Annotated); Abstract.
ABSTRACT: Scope and Level -- A tabulation of 160 case studies carried out in 14 countreis and covering undertakings in 29 industries concerning the impact of automation and other forms of technological change on work and workers. Methodology -- The bulletin analyzes the studies with a view to showing what and where aspects of the subject have been studied. Major Conclusion -- This study is only a tabulation and draws no conclusions concerning adjustments. However, the bibliography and tabulations are very comprehensive to 1963 and methods of adjustment such as retraining provisions, and effects on personnel are included in the tables.

65:9.30

TITLE: "Automation, Jobs, and Manpower"
AUTHOR: Charles C. Killingsworth
PUBLISHER: In Louis A. Ferman, et. al., eds., Poverty in America, Ann Arbor, The University of Michigan Press, 1965.
KEY WORDS: Adjustments; Historical, Macro, Employment, Unemployment, Skill Requirements; Public Policy (Education, Manpower Programs, Counseling); Theoretical Discussion; Footnotes (Few), Bibliography (None); Abstract.

ABSTRACT: Scope and Level -- A discussion of automation and its effects on jobs and manpower. Methodology -- What automation is, how automation differs from earlier technological changes, and the effects of automation on jobs are discussed. Major Conclusion-- There is increased importance to invest in human beings as a factor in economic growth. A shortage of trained manpower exists in the society as a whole and in the occupations which are needed to train others-teachers, counselors, social workers. Higher education and the means to finance it must be made more readily available.

65:9.40

TITLE: "Early Retirement: An Overview"
AUTHOR: Max D. Kossoris
PUBLISHER: Industrial Relations, Vol.4, No.3, May 1965, pp.1-14.
KEY WORDS: Adjustments; Historical, Employment, Collective Bargaining; Private Policy (Pension Rights, Early Retirement); Descriptive (Past Trends, Ongoing Trends); Footnotes (Few), Bibliography (None); No Abstract.

65:9.60

TITLE: "The Impact of Automation"
AUTHOR: Thorkil Kristensen, Willard Wirtz, Allan J. MacEachen
PUBLISHER: OECD Observer, No.14, February 1965, pp.20-21,25-26.
KEY WORDS: Adjustments; Micro, Macro, Government, Management Practices, Unions, Employment, Unemployment, Job Satisfaction; Private Policy (Retraining), Public Policy (Counseling, Manpower Programs, Legislation, Planning, Education); Descriptive (Future Trends); Footnotes (None), Bibliography (None); No Abstract.

Excerpts from speeches given by Kristensen, Wirtz, and MacEachen to an OECD's Manpower and Social Affairs Committee, U.S. Labor Department, and Canadian Ministry of Labor Conference in December 1964 on "The Requirements of Automated Jobs and Their Policy Implications."

65:9.70

TITLE: "Time to Kill, Automation, Leisure and Jobs"
AUTHOR: Eric Larrabee
PUBLISHER: The Nation, Vol. 201, No. 8, September 20, 1965, pp. 198-202.
KEY WORDS: Adjustments; Macro, Leisure, Employment, Unemployment; Theoretical Discussion; Footnotes (None), Bibliography (None); Abstract.
ABSTRACT: Scope and Level -- A discussion of the effects of automation on leisure and jobs. Methodology -- Positions people have taken on automation are discussed and the implications of automation on a future society are theorized. Major Conclusion -- Automation forces society to determine what its goals are going to be but it is absurd to assume that we will run out of productive work for men in the near future.

65:10.00

TITLE: "Effects of Technological Change on the Nature of Jobs"
AUTHOR: Louis Levine
PUBLISHER: Manpower Implications of Automation, Washington, U.S. Department of Labor, September 1965, pp.39-64.
KEY WORDS: Adjustments; Macro, Occupational Structure, Skill Requirements, Job Content; Public Policy (Manpower Programs, Information, Counseling, Education); Descriptive (Ongoing Trends); Footnotes (Few), Bibliography (None); No Abstract.

65:10.25

TITLE: "Automation's Impact on Personnel Administration: A Case Study"
AUTHOR: Otis Lipstreu and Kenneth A. Reed
PUBLISHER: *Personnel*, Vol.42, No.1, January-February 1965, pp.40-49.
KEY WORDS: Adjustments; Micro, Baking Industry, Case Study, Skill Requirements; Private Policy (Retraining, Relocation, Planning, Innovation Timing), Public Policy (Urban-Regional Policy, Manpower Programs); Empirical (Case); Footnotes (Few), Bibliography (None); No Abstract.

65:10.40

TITLE: "Manpower and Management in an Automated Age"
PUBLISHER: OECD Observer, No. 14, 1965, pp. 22-24.
KEY WORDS: Adjustments; Historical, Blue Collar-White Collar, Job Content, Management Practices, Skill Requirements; Private Policy (Retraining), Public Policy (Counseling, Manpower Programs); Descriptive (Ongoing Trends, Future Trends); Footnotes (None), Bibliography (None); Abstract.

ABSTRACT: Scope and Level -- A brief discussion of the possible implications of automation for management and industrial and social organization for countries other than the U.S. Methodology -- An examination of the characteristics of the new technology and of the American experience with automation to shed light on their possible impact in other countries. Major Conclusion -- Automation has had significant effects on job content and structure, and on management in the U.S. The actual effects of automation in other countries will depend on the specific environment in which it takes place, on the practices of management and on the economic policies that are adopted. It is essential that individual enterprises and national agencies work together to coordinate effective manpower policies and adjustments to automation.

65:10.50

TITLE: "Restrictions of Output Among Unorganized Workers"
AUTHOR: Stanley B. Mathewson
PUBLISHER: In Paul A. Weinstein, ed., *Featherbedding and Technological Change*, Boston, D.C. Heath and Company, 1965, pp. 2-11.
KEY WORDS: Adjustments; Historical, Micro, Case Studies, Manufacturing, Blue Collar Workers, Nonunion Workers, Work Rules; Private Policy (Work Rules); Descriptive (Past Trends); Footnotes (Few), Bibliography (None); No Abstract.

65:10.75

TITLE: "Clerks and Computers, A Study of the Introduction of Technical Change"
AUTHOR: Enid Mumford
PUBLISHER: The Journal of Management Studies, Vol.2, No.2, May 1965, pp.138-152.
KEY WORDS: Adjustments; Micro, Office Workers, Management Practices, Case Studies, Skill Requirements, Job Satisfaction; Private Policy (Retraining, Innovation Timing, Job Content); Empirical (Tables, Cases); Footnotes (Moderate), Bibliography (Small); No Abstract.

65:11.00

TITLE: "Technological Change and the Social Order"
AUTHOR: E. William Noland
PUBLISHER: In John C. McKinney and Edgar T. Thompson, eds., *The South in Continuity and Change*, Durham, N.C., Duke University Press, 1965, pp.167-197.
KEY WORDS: Adjustments; Micro, Macro, Management Practices, Unions, Sociological and Psychological Effects, Southeastern United States, Employment, Collective Bargaining, Labor Mobility, Job Content, Skill Requirements; Private Policy (Retraining, Early Retirement, Shorter Work Week, Job Content, Work Sharing, Job Security, Union Jurisdiction, Paygrades), Public Policy (Fiscal Policy, Urban-Regional Policy, Manpower Programs, Relocation, Planning, Education); Theoretical Discussion; Footnotes (Many), Bibliography (None); No Abstract.

65:11.50

TITLE: "The Case for Early Retirement"
AUTHOR: Charles E. Odell
PUBLISHER: Industrial Relations, Vol. 4, No. 3, May 1965, pp. 15-28.
KEY WORDS: Adjustments; Micro, Macro, Case Study, Automobile Industry, United Auto Workers, Older Workers, Sociological and Psychological Effects, Employment, Collective Bargaining; Private Policy (Pension Rights, Early Retirement), Public Policy (Income Maintenance, Retirement, Education); Empirical (Tables, Case); Footnotes (None), Bibliography (None); Abstract.

ABSTRACT: Scope and Level --- A study of the United Auto Workers early retirement program. Methodology -- The UAW early retirement program is examined and implications for needed services to older people are described. Major Conclusion-- If early retirement is to be encouraged as a reward for long years of service, programs must be developed to serve the retired person. Some of these programs are adequate income maintenance, through social security and private pension plans; adequate health care; low cost housing; opportunities for volunteer service to the community; social and recreation programs; and adequate education and training for all workers to ensure that those who are dislocated, for whatever reason, do not lose the opportunities to retire with dignity and security because of chronic unemployment.

65:13.00

TITLE: Farmers, Workers and Machines: Technological and Social Change in Farm Industries of Arizona
AUTHOR: Harland Padfield and William E. Martin
PUBLISHER: Tucson, University of Arizona Press, 1965.
KEY WORDS: Adjustments; Micro, Farm Workers, Citrus Industry, Cotton Industry, Lettuce Industry, Arizona, Minority Group Workers, Mexican-Americans, Blacks, Indians, Sociological and Psychological Effects, Labor-Management, Employment, Unemployment, Skill Requirements, Job Content, Wage Effects, Labor Mobility; Private Policy (Retraining, Relocation), Public Policy (Minimum Wages, Legislation, Planning, Education); Empirical (Correlation, Sample, Tables, Cases); Footnotes (Few), Bibliography (Large); Abstract.

ABSTRACT: Scope and Level -- An extensive study of farm workers in the citrus, cotton, and lettuce industries of Arizona. Methodology -- The study is divided into five main areas: a general description of the harvest systems for Arizona citrus, lettuce, and cotton; an economic analysis of changes that are occurring in the industries; a description of a sample of workers employed in the crops in question; an analysis of the subcultures in Arizona farm labor; and an analysis of the role of each group in the system and the function of the system itself for each group. Major Conclusions -- Arizona agriculture is an instrument of exploitation of unsophisticated, culturally unassimilated peoples and also functions as an assimilative mechanism, an instrument of social changes working in the direction of upward occupational mobility. In the process of performing these reciprocal functions, it depletes itself of its own labor supply.

Human beings are always part of a social unit, with norms, values, and attitudes. These social groups are intertwined with the technological system and one cannot be altered without affecting the other. Social change implies technological change and vice versa.

The authors derive several conclusions applicable to manpower policies. If an unemployed worker is retrained, he should be retrained in the direction of what, for him, would be a higher occupational class. If possible, he should be retrained to advance in the same industry in which he was previously employed. If a worker can go no higher in an industry, he should then be retrained for another industry.

Retraining workers for more technologically advanced jobs without creating more jobs for the total market tends to aggrevate the problem retraining seeks to alleviate by increasing competition for the available jobs.

Generally, valid retraining and rehabilitation programs for occupational adjustment must take into account the institutional and cultural factors. Institutional and social adjustments that must be made by a trainee on his new job are very important to the success of his adjustment. Groups should have a role in determination of policy and workers and administrators must understand the social groups with which they're dealing.

65:14.00

TITLE: "Automation - Key to Lifetime Jobs?"
AUTHOR: A. H. Raskin
PUBLISHER: Management Review, Vol.54, No.1, January 1965, pp.58-61.
KEY WORDS: Adjustments; Micro, Macro, Unions, Employment, Job Security, Collective Bargaining; Private Policy (Seniority, Work Rules, Pension Rights, S.U.B., G.A.W., Attrition, Job Security), Public Policy (Full Employment); Descriptive (Ongoing Trends, Future Trends); Footnotes (None), Bibliography (None); No Abstract.

65:16.00

TITLE: "Adjustment to Technological Change: Discussion"
AUTHOR: R. Thayne Robson
PUBLISHER: Proceedings of the Eighteenth Annual Winter Meeting, Industrial Relations Research Association, New York, December 28 and 29, 1965, pp.151-153.
KEY WORDS: Adjustments; Micro, Airline Pilots, Maritime Industry, Unions, Employment, Collective Bargaining; Descriptive (Ongoing Trends); Footnotes (None), Bibliography (None); No Abstract.

65:17.00

TITLE: "The Manpower Problems of Automation"
AUTHOR: Edward Salner
PUBLISHER: Employment Service Review, Vol. 2, No. 10, October 1965, pp. 48,51-54.
KEY WORDS: Adjustments; Macro, Employment, Unemployment, Skill Requirements; Public Policy (Urban-Regional Policy, Planning, Information, Counseling, Manpower Programs, Retraining, Education); Descriptive (Ongoing Trends); Footnotes (None), Bibliography (None); Abstract.
ABSTRACT: Scope and Level -- A discussion of the effects of automation on manpower. Methodology -- A description of the approaches used by the U.S. Employment Service to determine how their efforts should be modified to meet the needs of employers and employees as they face technological change. Major Conclusions -- Unemployment often hits one region or area harder than others and local offices of the Employment Service must meet the needs of their particular community. Many displaced workers may easily be retrained for new jobs as long as there is sufficient demand for workers. Information and counseling are essential to retraining and placing workers.

65:18.00

TITLE: Automation, The Challenge of Men and Machines
AUTHOR: Joel Seldin
PUBLISHER: New York, Coward-McCann, Inc., 1965.
KEY WORDS: Adjustments; Macro, Micro, Unions, Management Practices, Government, Employment, Unemployment; Private Policy (Retraining, Work Rules, Seniority, Attrition, Planning, Job Content), Public Policy (Full Employment, Manpower Programs, Education, Income Maintenance); Descriptive (Ongoing Trends, Tables); Footnotes (None), Bibliography (None); No Abstract.

65:18.50

TITLE: "The Costs of Unemployment"
AUTHOR: Senate Special Committee on Unemployment Problems
PUBLISHER: In Arthur M. Okun, ed., The Battle Against Unemployment, New York, W.W. Norton, 1965, pp. 7-12.
KEY WORDS: Adjustments; Macro, Micro, Unemployed Workers, Unemployment, Sociological and Psychological Effects; Public Policy (Education, Unemployment Compensation); Descriptive (Ongoing Trends, Future Trends); Footnotes (None), Bibliography (None); Abstract.

ABSTRACT: Scope and Level -- The economic, emotional, and social costs of unemployment are discussed. Methodology -- The economic cost to the individual and his family and the social effects of unemployment are discussed. Major Conclusion -- Unemployment affects all aspects of a person's life. Communities with high levels of unemployment are affected in all sectors of their economy. Because of the far-reaching negative aspects of unemployment, both to the individuals who are unemployed and to the community as a whole, the economic and social costs of unemployment deserve far more attention than they have received.

65:19.00

TITLE: "Automation: Its Impact on Labour"
AUTHOR: Shoji Shiba
PUBLISHER: Developing Economies, Vol. 3, June 1965, pp. 230-246.
KEY WORDS: Adjustments; Micro, Public Utilities, Japan, Skill Requirements; Private Policy (Retraining); Empirical (Tables, Cases); Footnotes (Few), Bibliography (None); Abstract.

ABSTRACT: Scope and Level -- A study of the impact of automation on workers in thermal power stations in Japan. Methodology -- Three plants with differing levels of technology are studies. Major Conclusions -- Those workers with the job level closest to the new technique were least resistant to learning the technique. A continuity exists between the technique involved and the understanding of it. That is, retraining should be conducted on a step-by-step basis, low level to medium level to high level, to overcome psychological barriers.

65:19.50

TITLE: "The Economics of Featherbedding"
AUTHOR: Norman J. Simler
PUBLISHER: In Paul A. Weinstein, ed., Featherbedding and Technological Change, Boston, D.C. Heath and Company, 1965, pp. 55-65.
KEY WORDS: Adjustments; Micro, Unions, Employment, Wage Effects, Captial-Labor Ratio, Collective Bargaining, Work Rules; Private Policy (Work Rules, G.A.W.); Theoretical Model; Footnotes (Few); Bibliography (None); Abstract.

ABSTRACT: Scope and Level -- The article looks at the effect strong unions, by imposing make work or "featherbedding" rules, can have on employment, prices, and output of firms in monopoly and in pure competition. Methodology — It is a micro level discussion using graphical analysis with production functions, cost and revenue curves in monopoly and in pure competition. Major Conclusion -- Unions attempt to maintain employment and earnings by imposing work and employment rules and it is possible for this to occur in both monopoly and pure competition under the two types of featherbedding discussed.

Two types of featherbedding rules may be distinguished. Type I requires employers to employ a given number of workers (nonoptimal) at a specified wage with factor proportions left unspecified, (a guaranteed annual wage). Type II requires a fixed captial-labor ratio for whatever output and thus employment level is chosen by the firm, with a specified wage rate.

Under Type I rules average cost would be higher but marginal cost lower for output levels where labor is in excess of optimum. Thus increased output with lower prices and higher employment would occur. Under monopoly this situation would continue as long as profits were at least at the "normal" level or above. Under pure competition as each firm increased output the industry price would fall and eventually firms would have to shut down until the industry supply reduced enough to force the price up to cover the higher average cost. The total effect on employment would depend on the number of lost jobs in plants which shut down compared to the increased employment in the remaining firms.

Under Type II rules both average and marginal costs are higher, thus lower output and higher prices are generated in monopoly and pure competition. If this approach maintains or increases employment the unions must pick a labor-capital ratio and a wage rate such that employment at the new lower output level is higher than it would have been at the old higher output level which would have occurred without featherbedding rules.

65:19.75

TITLE: "Some Effects of Automation on Office Jobs"
PUBLISHER: The Office, Vol. 61, February 1965, p. 71.
KEY WORDS: Adjustments; Micro, Office Workers, Employment; Private Policy (Attrition, Retraining); Empirical (Sample); Footnotes (None), Bibliography (None); Abstract.

ABSTRACT: Scope and Level -- A description of the effects of automation on office jobs in 1964. Methodology -- The results of a poll of 200 personnel officers are described. Major Conclusion-- Most personnel officers felt that automation would increase the number of jobs in the next five years. Overall, 43% predicted increases; 28% decreases; 29% no appreciable change. For their own particular industry, only 29% predicted increases in employment. 75% of the companies added new jobs directly related to automation in the preceding year. To minimize effects of any displacement caused by automation most firms used attrition and retraining.

65:20.00

TITLE: "The Impact of Technological Change on Industrial Relations in Japan"

AUTHOR: Mikio Sumiya

PUBLISHER: British Journal of Industrial Relations, Vol.3, No.2, July 1965, pp.210-218.

KEY WORDS: Adjustments; Historical, Micro, Japan, Collective Bargaining, Employment, Labor Mobility; Private Policy (Retraining, Skill Requirements); Descriptive (Past Trends, Ongoing Trends); Footnotes (None), Bibliography (None); No Abstract.

65:20.25

TITLE: "Overcoming Resistance to Technological Change"
AUTHOR: Alain Touraine
PUBLISHER: OECD Observer, No. 18, 1965, pp. 10-11.
KEY WORDS: Adjustments; Historical, Job Satisfaction; Review of the Literature; Footnotes (None), Bibliography (None); Abstract.

ABSTRACT: Scope and Level -- A limited survey of existing literature investigating worker response to technological change. Methodology -- Insights are gleaned from the literature to gain greater understanding of how workers react to change and why. Major Conclusion-- Successful adjustment to technological change is dependent on: (1) the relative importance of work in an employee's life, (2) the nature of the community, (3) a worker's view of society, whether or not he believes in progress as a means of advancing society, (4) economic security, and (5) a sense of creativity on the job.

65:20.50

TITLE: "The Manpower Implications of Technological Change"
AGENCY: U.S. Department of Labor
PUBLISHER: Monthly Labor Review, Vol. 88, No. 2, February 1965, pp.iii-iv.
KEY WORDS: Adjustments; Macro, Canada, U.S., Employment, Unemployment, Skill Requirements; Private Policy (Attrition, Layoff Notification, Planning, Severance Pay, Work Sharing, Retraining, Placement), Public Policy (Full Employment, Monetary Policy, Fiscal Policy, Manpower Programs, Relocation, Placement Service, Public Representation in Bargaining, Planning, Education); Descriptive (Ongoing Trends); Footnotes (None), Bibliography (None); No Abstract.

65:20.60

TITLE: Manpower Planning to Adapt to New Technology at Electric and Gas Utility

AGENCY: Bureau of Labor Statistics, U.S. Department of Labor, Report No. 293

PUBLISHER: Washington, U.S. Government Printing Office, April 1965.

KEY WORDS: Adjustments; Micro, Case Study, Public Utilities, Management Practices, Unions, Wage Effects, Job Security; Private Policy (Advance Notification, Planning, Labor-Management Cooperation, Transfer Options, Seniority, Retraining); Empirical (Case); Abstract.

ABSTRACT: Scope and Level -- The report describes the personnel procedures and practices used by a public electric and gas utility to introduce laborsaving technology with a minimum of hardship to employees. Three major technological changes affecting large numbers of blue-collar workers were introduced: the conversion from manufactured to natural gas, introduction of an automated telephone system, and the changeover to automated passenger elevators. These changes involved alternative employment for more than 1900 employees and were accomplished with no layoffs, partly because the change was timed to accompany an expansion in operations. Methodology -- The report is based on information collected through interviews with officials of the power company and with officers of the employees' union. Major Conclusions -- Manpower planning methods used to achieve successful conversion to new technology and avoid displacement of employees were the following:

1. Management provided advance notice of change to the union and employees as much as 2 years in advance of changeover.

2. Planning began 6 months to 2 years prior to the installation of the new equipment. A substantial amount of planning was carried out jointly by management and the union.

3. Orderly transfer to another job was the adjustment ultimately achieved for nearly all displaced employees. Employees were given a choice of available jobs within the company consistent with their seniority, ability and experience, and company manpower needs.

4. Training was a key measure in facilitating the successful adjustment of employees assigned to new work. Training was almost always provided on the job during working hours. Substantial wage increases were received by some employees after training.

5. Maintenance of pay for those reassigned to new work eliminated a major source of employee anxiety.

65:21.00

TITLE: "Technology and the Labor Force in the Offshore Maritime Industry"
AUTHOR: Aaron W. Warner
PUBLISHER: Proceeding of the Eighteenth Annual Winter Meeting, Industrial Relations Research Association, New York, December 28 and 29, 1965, pp. 139-150.
KEY WORDS: Adjustments; Micro, Maritime Industry, Unions, Employment, Skill Requirements, Unions, Collective Bargaining; Private Policy (Planning, Attrition, Retraining, Pension Rights, Multicraft Union, Innovation Timing); Descriptive (Ongoing Trends, Future Trends); Footnotes (Few), Bibliography (None); Abstract.

ABSTRACT: Scope and Level -- This paper deals with some of the problems involved in attempting to modernize the U.S. Merchant Marine through the adoption of shipboard automation. Methodology -- Problems such as reduced labor needs, changing skill level requirements, union resistance to change, and overlapping trade union functions and jurisdiction, arising from increased shipboard automation are discussed. Major Conclusion -- The employment situation in the maritime industry as a whole is worsening and it is difficult to get union acceptance of new automation. There is a labor surplus for the unskilled jobs but attrition among licensed men, with higher skills, may result in a shortage at those levels. A transition to a larger fleet is one way of gaining union acceptance of technology but the shortage of officers limits this transition. The labor force must be balanced by retraining unskilled workers for jobs ashore or to become licensed officers and by hastening the retirement of older men.

Unions will need to take over much of the retraining function and must work out inter-union arrangements to facilitate upgrading and promotion of their members. Transfer of pension rights is imperative and an industry-wide plan should be devised.

New technology will shift job classifications and cause union jurisdictional problems. Existing craft-oriented unions must be reshaped along industrial lines.

65:21.30

TITLE: "Collective Bargaining Solutions to Technological Change"
AUTHOR: Arnold Weber
PUBLISHER: Monthly Labor Review, Vol.88, No.1, January 1965, pp.17-18.
KEY WORDS: Adjustments; Historical, Management Practices, Collective Bargaining; Private Policy (Early Retirement, Shorter Work Week, Severance Pay, Job Security); Descriptive (Past Trends, Ongoing Trends); Footnotes (None), Bibliography (None); No Abstract.

65:21.60

TITLE: "Featherbedding: A Theoretical Analysis"
AUTHOR: Paul A. Weinstein
PUBLISHER: In Paul A. Weinstein, ed., Featherbedding and Technological Change, Boston, D.C. Heath and Company, 1965, pp. 44-54.
KEY WORDS: Adjustments; Micro, Skilled Workers, Unions, Collective Bargaining, Hours of Work: Private Policy (Work Rules, Multicraft Unions, Innovation Type); Theoretical Model; Footnotes (Many), Bibliography (None); Abstract.

ABSTRACT: Scope and Level -- The article develops a graphical model of the firm in imperfect competition to discuss the possible impact of featherbedding actions by unions in reaction to technological change. Methodology -- A long run production function and marginal cost and average cost curve graphs are used in the analysis. Main Conclusion -- Unions which represent workers with specialized skills (craftsmen) can seek and often gain "make work" or featherbedding clauses in their contract. Several case studies are mentioned in order to reinforce conceptual ideas.

Using a constant output assumption, three possible reactions by a skilled craft union in a firm introducing labor saving machinery are sighted. The union can accept the unemployment created, reduce its wage rate to restore employment, or seek featherbedding clauses in the contract which partially or fully restore the old employment levels. The first is never accepted by a strong union, The second is rarely used especially by a strong union, thus the third solution, featherbedding, is the one usually sought. However, featherbedding increases unit labor cost and lowers the optimum output level and employment somewhat.

A union bargaining strategy is discussed which starts with an "all or nothing" position but because of public pressure and management resistance this is softened somewhat.

For management the policy response is to allow for featherbedding in the technological increasing investment decision when calculating the expected rate of return. If an investment won't pay because of featherbedding, management might seek a complete technological change which completely eliminates a type of worker so that there are no employees left for the union to represent. The union could counter this by going to multicraft, multiskill based unions which could not be eliminated. However, no significant move in that direction has appeared.

65:22.00

TITLE: "Management-Labor Relations in the Retail Food Industry: Emphasis, Technological Change"
AUTHOR: Robert Stanley Welsh
PUBLISHER: unpublished Ph.D. Dissertation, Ohio State University, 1965.
KEY WORDS: Adjustments; Micro, Retail Food Industry, Management Practices, Employment, Collective Bargaining, Union-Management Powers, Work Rules; Private Policy (Labor-Management Cooperation, Innovation Timing, Planning, Advance Notification); Empirical (Sample); Footnotes (Moderate), Bibliography (Moderate); Abstract.
ABSTRACT: Scope and Level -- A study focusing on the implications of new technology on management-labor relations in the retail food industry. Methodology -- Personal interviews of management and union officals were used as a source of information on the changes in the retail food industry and adjustments made to those changes. Major Conclusions -- Adoption of technology has been gradual over a period of time. Changes can be made quite successfully if management informs unions of projected change and if the change is adopted gradually with careful consideration of the effects it will have on personnel.

65:23.00

TITLE: "The Pace of Technological Change and the Factors Affecting It"
AUTHOR: Seymour L. Wolfbein
PUBLISHER: Manpower Implications of Automation, Washington, U.S. Department of Labor, September 1965, pp.15-28.
KEY WORDS: Adjustments; Macro, Employment, Unemployment; Private Policy (Attrition, Retraining), Public Policy (Manpower Programs, Information, Education); Empirical; Footnotes (Few), Bibliography (None); No Abstract.

64:1.00

TITLE: The Triple Revolution
AUTHOR: The Ad Hoc Committee on the Triple Revolution
PUBLISHER: Santa Barbara, California, The Ad Hoc Committee on the Triple Revolution, 1964.
KEY WORDS: Adjustments; Macro, Government, Unemployed Workers, Sociological and Psychological Effects, Employment, Unemployment; Public Policy (Full Employment, Fiscal Policy, Urban-Regional Policy, Public Employment Programs, Income Maintenance, Public Representation in Collective Bargaining, Legislation, Planning, Education, Redistribution of Income); Theoretical Discussion; Footnotes (None), Bibliography (None); Abstract.
ABSTRACT: Scope and Level -- A discussion of the triple revolution, economic, military, and social changes, with an emphasis on cybernation and its effects. Methodology -- A discussion of cybernation, its effects on employment, and possible public policies to alleviate the negative effects on certain groups of people. Major Conclusion -- The only way to effectively adjust to technological change is not to fight change but to accept it and use it, rationally and humanely, to benefit mankind.

There must be major changes in our underlying beliefs, values, and institutions. Every individual and family, as a matter of right, must have an adequate income. National policy must be directed more toward the welfare of people than it has been in the past.

Specific programs suggested include a massive program to build up the educational system, a public works program, low-cost housing, rapid transit sytems, a public power system based on coal, revamping of the tax structure for a more equitable redistribution of income, and trade unions for the unemployed. Government planning agencies will be needed to oversee the implementation of these proposals and the pace of cybernation.

64:2.00

TITLE: Technology and Woman's Work
AUTHOR: Elizabeth Faulkner Baker
PUBLISHER: New York, Columbia University Press, 1964.
KEY WORDS: Adjustments; Historical, Women, Employment, Collective Bargaining, Blue Collar-White Collar, Unions, Skill Requirements, Hours of Work; Private Policy (Shorter Work Week, White Collar Unionization), Public Policy (Minimum Wages, Legislation, Education); Descriptive (Past Trends, Ongoing Trends); Footnotes (Many), Bibliography (Large); Abstract.

ABSTRACT: Scope and Level -- A history of technology and women's work in the U.S. from the 18th century to the present time. Methodology-- The role of women in many different occupations and her changing role as technology is adopted are traced. Major Conclusion -- Changing technology has increasingly provided new opportunities for women in many occupations. However, there are barriers to full utilization of women workers, sex prejudice in particular. Woman's place in the economic world is confused; some women want the old ways, some the new, and most are in between due to cultural and social conditioning.

In order to fully utilize changing technology, women must be recognized as having more in common with men than society has so far been willing to accept. Men and women are more alike than different, and complementary, rather than opposite. Part time work to enable both men and women to lead private lives as well as careers is one possibility arising from the increased productivity of technology.

64:3.00

TITLE: Methods of Adjusting to Automation and Technological Change
AUTHOR: Derek Bok and Max D. Kossoris
PUBLISHER: Bureau of Labor Statistics, Office of Productivity and Technological Developments, U.S. Department of Labor, 1964
KEY WORDS: Adjustments; Micro, Case Studies, Employment, Collective Bargaining, Work Rules, Work Time, Fringe Benefits, Labor Mobility; Private Policy (Seniority, Relocation, Retraining, Severance Pay, Pension Rights, S.U.B., Attrition, Early Retirement, Layoff Notification, Relocation, Apprenticeship, Shorter Work Week); Descriptive (Ongoing Trends); Footnotes (Many), Bibliography (None); Abstract.
ABSTRACT: Scope and Level -- A discussion of the principal methods which private parties have employed to facilitate the adjustment of employees who have been displaced through automation or technological change. Methodology -- The methods of adjustment are discussed individually using examples to illustrate the method and the effectiveness of the method in given situations. Positive and negative aspects are often ennumerated for each mechanism. Major Conclusion -- For each method of adjustment to technological change, situations in which it will be effective and in which there will be problems are considered.

64:6.00

TITLE: Report to the Governor and to the Legislature
AUTHOR: California, Commission on Manpwer, Automation, and Technology
PUBLISHER: Sacramento, State of California, 1964.
KEY WORDS: Adjustments; Macro, Micro, Unions, Management Practices, Government, California, Employment, Unemployment, Skill Requirements; Private Policy (Seniority, Relocation, Retraining, Severance Pay, G.A.W., Attrition, Early Retirement, Shorter Work Week, Job Security, Layoff Notification, Skill Requirements), Public Policy (Full Employment, Monetary Policy, Fiscal Policy, Urban-Regional Policy, Public Employment Programs, Information, Counseling, Manpower Programs, Relocation, Placement Service, Minimum Wages, Shorter Work Week, Retirement, Unemployment Compensation, Public Representation in Bargaining, Legislation, Planning, Education); Empirical (Tables); Footnotes (Few), Bibliography (Small); Abstract.
ABSTRACT: Scope and Level -- A discussion of the findings of the Commission on Manpower, Automation, and Technology. Methodology -- The Commission's work in the previous year is discussed and ideas generated from that research are laid out in projects for the next year. Major Conclusions -- It was determined that little was known concerning the impact of technological change or the long run adjustments that must be made to the change. However, enough evidence was compiled to indicate that the present efforts, both public and private, were not adequate to deal with the problems faced at that time, let alone the problems anticipated as a result of further change.

In general, it was concluded that adjustments are needed at both the public and private level to adequately cope with the individual and social problems generated by technological change.

64:7.00

TITLE: "The Kaiser Steelworkers Long Range Sharing Plan; Has It General Application?"
AUTHOR: David L. Cole
PUBLISHER: In Charles Markham, Jobs, Men, And Machines: Problems of Automation, New York, Praeger, 1964, pp. 63-71.
KEY WORDS: Adjustments; Micro, Unions, Management Practices, Steel Industry, Union-Management Powers, Collective Bargaining; Private Policy (Labor-Management Cooperation, Attrition, Reserve Labor Pool, S.U.B.); Descriptive (Ongoing Trends); Footnotes (None), Bibliography (None); Abstract.
ABSTRACT: Scope and Level -- A description of the Kaiser steelworkers long range sharing plan. Methodology -- The Kaiser Plan is described and applications for other industries are considered. Major Conclusion -- The real contribution of the Kaiser Plan is not the specific provisions but the general approach. That is, it demonstrates that practical solutions can be found when labor and management are genuinely concerned with cooperating on viable solutions to promote efficiency and provide protective assurances and sense of participation for employees. By working together, resistence to technological change can be overcome and successful adjustment to change can be made.

64:8.00

TITLE: "Automation: The Impact on Jobs and People"
AUTHOR: Robert B. Cooney
PUBLISHER: American Federationist, Vol. 71, No. 4, May 1964, pp. 3-8.
KEY WORDS: Adjustments; General Equilibrium, Economic Growth, Employment, Unemployment, Blue Collar-White Collar, Skill Requirements; Private Policy (Retraining, Attrition, Early Retirement, Job Security, Relocation, Layoff Notification, Severance Pay, Pension Rights), Public Policy (Full Employment, Public Employment Programs, Manpower Programs, Relocation, Public Representation in Bargaining); Descriptive (Ongoing Trends); Footnotes (None), Bibliography (None); No Abstract.

64:8.50

TITLE: Recent Collective Bargaining and Technological Change
AUTHOR: L.M. David
PUBLISHER: Bureau of Labor Statistics, U.S. Department of Labor, Report No. 266, Washington, U.S. Government Printing Office, March 1964.
KEY WORDS: Adjustments; Historical, Unions, Management Practices, Steel Industry, Chemical Industry, Railroad Industry, Airline Industry, Meatpacking Industry, Automobile Industry, Longshoremen, Oil Industry, Job Security, Collective Bargaining, Union-Management Powers, Earnings; Private Policy (Seniority, Relocation, Retraining, Paygrades, Severance Pay, Pension Rights, S.U.B. G.A.W., Attrition, Early Retirement, Shorter Work Week, Job Security, Layoff Notification, Vacations); Descriptive (Past Trends); Footnotes (Moderate), Bibliography (None); Abstract.
ABSTRACT: Scope and Level -- This report summarizes some of the recent collective bargaining approaches to problems of reduced income and job security arising as a result of technological change. Methodology -- Some of the provisions adopted in collective bargaining agreements in recent years which have received considerable public attention are summarized. Provisions are used to illustrate approaches. No attempt has been made to systematically appriase all approaches. Major Conclusion -- The Kaiser Steel Plan is described in which displaced workers are placed in an employment reserve and are guaranteed work and/or wages equal to what they made before displacement. Agreements made for railroad workers are listed. These contain such provisions as supplemental unemployment benefits, severance pay, moving expenses connected with relocating, advance notification to employees of mergers or other actions which would reduce employment, retention of fringe benefits, guarantees for the existence of a given number of jobs, and retraining programs. Airline agreements covering severance pay and retraining programs are described. Armour Company's technological adjustment pay plan is explained. The West Coast Longshoremen agreement is also discussed. No conclusions, as such, are drawn; only summaries of several approaches are given, without comment on their effectiveness.

64:9.00

TITLE: The Nature of Automated Jobs and Their Educational and Training Requirements

AUTHOR: S.A. Fine

PUBLISHER: McLean, Virginia, Human Sciences Research, Inc., prepared for the Office of Manpower, Automation, and Training, Department of Labor, June 1964.

KEY WORDS: Adjustments; Micro, Macro, Electronics Industry, Computer Industry, Steel Industry, Women, Skill Requirements, Job Satisfaction; Private Policy (Retraining, Seniority), Public Policy (Education); Empirical (Tables, Sample); Footnotes (Few), Bibliography (Small); Abstract.

ABSTRACT: Scope and Level -- An exploration of the feasibility of obtaining objective information concerning the impact of automation on the educational and training requirements of jobs. Methodology -- Questionnaires and interviews of management and workers were used to analyze jobs involved in making the same product before and after the introduction of automation. Major Conclusions -- Automation tends to eliminate low functional level jobs and increase high functional level jobs. There is a tendency to employ women in low functional level jobs where there is not much chance of advancement. Where low functional level jobs do tend to lead to high functional level jobs, more education is required at the low level because of the possibility of advancement.

Most jobs in automated situations are considered to be more challenging and demanding and tension producing than non-automated jobs. Low functional level workers perceive skill level, working conditions, education, and training to be less on automated jobs, while high functional level workers perceive these variables tobe greater. Nevertheless, both groups indicate a preference for automated to non-auotmated jobs.

64:10.00

TITLE: Automation: Industrialization Comes of Age
AUTHOR: William Francois
PUBLISHER: New York, Collier, 1964.
KEY WORDS: Adjustments; Micro, Macro, Unions, Management Practices, Coal Miners, Unemployment, Fringe Benefits, Skill Requirements; Private Policy (Retraining, S.U.B., G.A.W., Relocation, Early Retirement, Paygrades, Shorter Work Week, Vacations, Planning, Attrition, Work Rules), Public Policy (Fiscal Policy, Urban-Regional Policy, Public Employment Programs, Manpower Programs, Shorter Work Week, Unemployment Compensation, Planning, Education); Descriptive (Ongoing Trends, Future Trends); Footnotes (Few), Bibliography (None); No Abstract.

64:11.00

TITLE: "Some Proposals for Government Policy in an Automating Society"
AUTHOR: Herbert J. Gans
PUBLISHER: The Correspondent, January-February 1964.
KEY WORDS: Adjustments; Macro, Micro, General Equilibrium, Unskilled Workers, Semi-Skilled Workers, Skilled Workers, Blue Collar, White Collar, Professionals, Government, Employment, Unemployment, Blue Collar-White Collar, Skill Requirements, Private-Public Relations, Job Content, Job Satisfaction, Wage Effects, Working Conditions, Work Time, Leisure; Private Policy (Retraining, Apprenticeship, Shorter Work Week, Overtime), Public Policy (Fiscal Policy, Shorter Work Week, Public Employment Programs, Income Maintenance, Legislation, Planning, Minimum Wages); Theoretical Discussion; Footnotes (Few), Bibliography (None); Abstract.

ABSTRACT: Scope and Level -- A discussion of seventeen possible measures for coping with poverty and unemployment which could be undertaken by the government. Methodology -- The seventeen proposals are a set of individual ideas and are not to be considered as parts of an integrated program. The proposals are based on the assumption that, in the near future, technological economic trends will lead to increased producitivity and changes in the level and structure of unemployment. Major Conclusion -- The proposals are grouped into three main areas for coping with problems the author sees as immanent: 1) the upgrading and shifting of workers into skilled jobs, blue collar, white collar, and professional; 2) the creation of more jobs, especially for the unskilled and semi-skilled; and 3) the elimination of poverty.

The author feels that there is no one permanent solution to the problem of poverty and unemployment. A considerable amount of unemployment is here to stay. Our society places great emphasis on work as the determinant of social and personal worth. Revisions must be made in this underlying belief so that those who are unable to work, for whatever reason, will still be able to maintain their dignity and use their leisure time well.

TITLE: "Has Structural Unemployment Worsened?"
AUTHOR: R. A. Gordon
PUBLISHER: Berkeley, University of California, Institute of Industrial Relations, Reprint No. 234, May 1964.
KEY WORDS: Adjustments; Historical, Macro, General Equilibrium, New Labor Force Entrants, Younger Workers, Teenagers, Nonwhite Workers, Unemployment, Blue Collar-White Collar, Skill Requirements, Labor Mobility, Private-Public Relations, Structural Unemployment; Private Policy (Job Content), Public Policy (Planning, Information, Education, Full Employment, Manpower Programs); Empirical (Tables, Input-Output); Footnotes (Many) Bibliography (Small); Abstract.

ABSTRACT: Scope and Level -- An analysis of the high unemployment level prior to 1964 and of how much of this high level of unemployment is due to a deficiency of aggregate demand and how much is the result of "structural" changes. These structural changes make a growing fraction of the labor force unsuited for the jobs that are available. Methodology -- An analysis of unemployment among youth by occupation, industry, color and education which presents trends which have persisted and some reasons for the trends. Conclusion-- Three broad conclusions are drawn from the study (1) the classification of the labor force and the incidence of unemployment is distributed unevenly and so there is always a structural component in total unemployment; (2) structural unemployment has not worsened relatively from the mid-fifties to the mid-sixties except for the worsened position of teenagers; and (3) the use of total unemployment from the mid-fifties to the early sixties reflects the failure of aggregate demand to rise at the rate required by the growth of the labor force and the increase in labor productivity.

64:12.50

TITLE: "Granite City Retrains for Technology"
PUBLISHER: Steel, February 17, 1964, pp.154-156.
KEY WORDS: Adjustments; Micro, Steel Industry, Employment, Skill Requirements, Private-Public Relations, Labor Mobility, Education Requirements, Work Rules; Private Policy (Labor-Management Cooperation, Planning, Job Content, Skill Requirements, Innovation Type), Public Policy (Information, Counseling, Manpower Programs, Education); Descriptive (Past Trends, Ongoing Trends, Case); Footnotes (None), Bibliography (None); No Abstract.

64:13.00

TITLE: "Automation: A Real 'H' Bomb"
AUTHOR: A. J. Hayes
PUBLISHER: In Charles Markham, *Jobs, Men, and Machines: Problems of Automation*, New York, Praeger, 1964, pp.48-53.
KEY WORDS: Adjustments; Micro, Macro, Management Practices, Employment, Unemployment; Private Policy (Attrition, Retraining, Layoff Notification, Paygrades, G.A.W., Early Retirement, Severance Pay, Relocation), Public Policy (Shorter Work Week, Public Employment Programs, Planning, Education); Theoretical Discussion; Footnotes (None), Bibliography (None); No Abstract.

64:14.00

TITLE: Address prepared for delivery to the Seminar on Private Adjustments to Automation and Technological Change, Wharton School of Finance and Commerce, Philadelphia, Pennsylvania, May 21, 1964
AUTHOR: Luther H. Hodges
PUBLISHER: Washington, U.S. Department of Commerce, 1964.
KEY WORDS: Adjustments; Micro, Macro, Government, Employment, Private-Public Relations, Labor Mobility; Private Policy (Relocation, Retraining, Severance Pay, Planning, S.U.B., Innovation Timing), Public Policy (Manpower Programs, Relocation, Unemployment Compensation, Education); Descriptive (Ongoing Trends, Future Trends); Footnotes (None), Bibliography (None); No Abstract.

64:15.00

TITLE: "The Gains and Losses from Technological Change"
AUTHOR: John W. Kendrick
PUBLISHER: Journal of Farm Economics, Vol. 46, December 1964, pp. 1065-1074.
KEY WORDS: Adjustments; Macro, General Equilibrium, Frictional Unemployment, Structural Unemployment, Wage Effects, Education Requirements, Skill Requirements, Labor Mobility; Private Policy (Retraining, Innovation Timing, Innovation Type, Job Content), Public Policy (Manpower Programs, Planning, Fiscal Policy, Monetary Policy, Income Redistribution); Theoretical Discussion; Footnotes (None), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — Technological change is considered in two roles: (1) a reducer of real cost per unit of output and (2) as a cause of improvements in the quality and variety of final goods. The article is confined to a general theoretical discussion of the issues of gains and losses of technological change, because of the difficulty in quantifying these variables. Methodology — An attempt is made to indicate some of the chief types of gains and losses and to suggest some main features which rigorous analysis would need to incorporate. Major Conclusions — Technological change has been of major importance in a movement toward greater equality in the distribution of income in the U.S. since the 1920's. Technological knowledge has made possible the transfer of a high volume of savings into productive resources.

Due to technological change there has been an increased need for skilled and professional people. This in turn has caused a greater investment in education needed to obtain an upgraded labor force. With the increased supply of trained labor, there has been a narrowing range of wages and salaries. Consequently, the upper income groups over the long run have been the relative losers and the lower income groups have been the relative gainers. However, in an absolute sense, the real losers are the lower income groups who are technologically displaced. These people require assistance in the form of retraining in order to obtain employment.

64:16.00

TITLE: "How the 25 Hour Week Has Worked"
AUTHOR: Theodore W. Kheel
PUBLISHER: In Charles Markham, *Jobs, Men and Machines: Problems of Automation*, New York, Praeger, 1964, pp. 100-106.
KEY WORDS: Adjustments; Micro, Case Study, Electricians, New York, Unions, Management Practices, Employment, Hours of Work; Private Policy (Labor-Management Cooperation, Shorter Work Week, Apprenticeship); Empirical (Case); Footnotes (None), Bibliography (None); Abstract.
ABSTRACT: *Scope and Level* -- A study of the 25 hour week won by Local 3 of the electrical workers in New York City. *Methodology* -- The effects of the 25 hour week on overtime and employment are examined. *Major Conclusion* -- The 25 hour week has not caused a great deal of overtime, with the exception of popular vacation periods. New jobs have been created, mainly by an increased number of apprentices, but the number is not as great as expected. Cooperation of management and labor in restricting overtime and promoting efficiency is essential.

64:17.00

TITLE: "The Automation Story: Machines, Manpower, and Jobs"

AUTHOR: Charles C. Killingsworth

PUBLISHER: In Charles Markham, Jobs, Men and Machines: Problems of Automation, New York, Praeger, 1964, pp. 15-47.

KEY WORDS: Adjustments; Macro, Employment, Skill Requirements; Public Policy (Fiscal Policy, Manpower Programs, Planning, Education); Empirical (Tables); Footnotes (None), Bibliography (None); Abstract.

ABSTRACT: Scope and Level -- A discussion of machines, manpower, and jobs. Methodology -- The author discusses automation, how automation differs from earlier forms of technology, and the effects of automation on jobs. Major Conclusions -- Automation is causing a reduction in simple, repetitive jobs and an increase in jobs requiring much skill and education. A shift from goods to services in our society accounts for a portion of this change.

Highly trained people are benefiting from more jobs as a result of automation, while workers with limited skills are being displaced. The MDTA program is a beginning for solving some of the displacement problems but is not extensive enough to help all the workers who need work.

Some type of program for giving loans for higher education is needed to "stimulate investment in human beings."

64:18.00

TITLE: "Automation and the Evaluation of Training"
AUTHOR: S.D.M. King
PUBLISHER: International Labour Review, September 1964, pp. 22-23.
KEY WORDS: Adjustments; Micro, Macro, Skill Requirements, Education Requirements, Job Content; Private Policy (Retraining, Planning), Public Policy (Manpower Programs, Relocation, Education); Descriptive (Ongoing Trends); Footnotes (None), Bibliography (None); Abstract.

ABSTRACT: Scope and Level -- An outline of the new types of skills demanded by automated processes and a discussion of various criteria that can be used in evaluating training programs. Methodology -- A description of the impact of automation on skills and its implications for the organization of work tasks, followed by a consideration of the methods of evaluating the effectiveness of the training in terms of the company framework. An examination is then made of methods of examination by which the quality of training programs and techniques can be evaluated. Major Conclusion -- Both industry and outside institutions have specific contributions to make to a training policy adapted to the particular conditions imposed by automation. Ways in which the gap between institutional and inplant training could be closed are suggested. Through a realistic appraisal of automation and an integrated approach to the problems of designing and evaluating an educational program, positive results concerning the effectiveness of an educational program could be obtained.

64:19.00

TITLE: Automation and Collective Bargaining
AUTHOR: Benjamin S. Kirsh
PUBLISHER: New York, Central Book Company, 1964.
KEY WORDS: Adjustments; Micro, Macro, Unions, Management Practices, Government, Employment, Unemployment, Collective Bargaining, Union-Management Powers, Llue Collar-White Collar, Work Rules, Job Content, Job Security; Private Policy (Seniority, Relocation, Retraining, Severance Pay, Pension Rights, S.U.B., G.A.W., Attrition, Work Rules, Shorter Work Week, Paygrades, Multicraft Union, Work Sharing, Advance Notificiaton, Planning, Labor-Management Cooperation), Public Policy (Full Employment, Monetary Policy, Fiscal Policy, Urban-Regional Policy, Information, Counseling, Manpower Programs, Relocation, Placement Service, Unemployment Compensation, Public Representation in Bargaining, Education, Planning); Descriptive (Past Trends, Ongoing Trends, Future Trends); Review of the Literature; Footnotes (None), Bibliography (Large); Abstract.
ABSTRACT: Scope and Level -- An inquiry into the effect of automation upon the institution of collective bargaining in its traditional and conventional forms. Methodology -- Ways in which collective bargaining has been affected by automation are examined. Individual agreements and theories proposed in the literature are cited where relevant. Major Conclusion -- Automation presents a great challenge to the institution of collective bargaining. Collective bargaining has been a successful vehicle for mediating differences between management and labor and can continue to be effective in dealing with problems of adjustment to technological change. Labor and management, working together through collective bargaining, using experience, determination and good judgment will be able to unite against the ill effects of automation, a common threat to industries' and their workers' prosperity and living standards.

64:19.50

TITLE: "Some Issues Involved in Studying the Manpower Effects of Automation and the Accompanying Problems of Adjustment of the Work Force"
AUTHOR: W. M. Larke
PUBLISHER: In International Labour Office, Labour and Automation, Bulletin #1, Automation: A Discussion of Research Methods, Geneva, International Labour Office, 1964, pp.70-80.
KEY WORDS: Adjustments; Macro, Micro, Government, Management Practices, Employment, Blue Collar-White Collar, Working Conditions, Skill Requirements; Private Policy (Retraining), Public Policy (Education); Theoretical Discussion; Footnotes (None), Bibliography (None); No Abstract.

TITLE: Transition to Automation, A Study of People, Production and Change
AUTHOR: Otis Lipstreu and Kenneth S. Reed
PUBLISHER: Boulder, Colorado, University of Colorado Press, 1964.
KEY WORDS: Adjustments; Micro, Case Study, Baking Industry, Job Security, Sociological and Psychological Effects, Skill Requirements, Working Conditions; Private Policy (Relocation, Retraining, Innovation Timing, Innovation Type); Empirical (Tables, Case); Footnotes (Moderate), Bibliography (None); Abstract.

ABSTRACT: Scope and Level -- A study of a large bakery undergoing a major change involving a new plant and new equipment. Methodology -- In-plant observations and interviewing of employees and management, for two years encompassing the transition period, were used to determine effects of the new technology. Major Conclusion -- Morale was very high in the company before the change but dropped considerably as the change approached and continued to drop to the end of the study. This indicates that more attention must be paid to morale fluctations and preventive action should be developed.

Technological change significantly modifies the work environment. Organizational problems will result and must be anticipated to ensure smooth adjustment to the new technology.

Skill level requirements will not shift consistantly either upward or downward but will move in different directions depending on the different stages of automation.

Supervisors are in particular need of extensive retraining for an effective transition for the entire plant. Retraining marginally qualified, incumbent employees for new jobs is an error which is difficult to correct.

64:21.00

TITLE: "Automation, Employment, and Human Values"
AUTHOR: Garth L. Mangum
PUBLISHER: *The Educational Record*, Vol. 45, No. 2, Spring 1964, pp. 122-127.
KEY WORDS: Adjustments; Macro, Government, Sociological and Psychological Effects, Employment; Public Policy (Full Employment, Monetary Policy, Fiscal Policy, Public Employment Programs, Manpower Programs, Shorter Work Week, Public Representation in Bargaining, Planning, Education); Theoretical Discussion; Footnotes (None), Bibliography (None); Abstract.

ABSTRACT: Scope and Level -- A consideration of automation, employment, and human values. Methodology -- Myths surrounding automation and technological change are examined; effects of automation on productivity and employment are discussed; the impact of rising productivity on human values is considered. Major Conclusion -- There are employment problems as a result of increased automation but these problems are solvable by known methods. There are great needs in the public sector of the economy and increased productivity can be used to meet these needs. A flexible system which can maintain full employment under any conceivable situation, amendments to the Employment Act designed to transfer its reliance from vague exhortation to positive obligation for job creation, and massive programs of education and retraining are needed.

Rising productivity makes it possible for everyone to attain a higher standard of living. Thus, automation can have a positive effect on human values if it is used to liberate people from the slavery of poverty.

64:23.00

TITLE: "Automation and Employment"
AUTHOR: S. Moos
PUBLISHER: The Political Quarterly, Vol.35, No.1, January-March 1964, pp.80-86.
KEY WORDS: Adjustments; Macro, Micro, Employment; Private Policy (Retraining, G.A.W.), Public Policy (Full Employment, Urban-Regional Policy, Manpower Programs, Shorter Work Week, Planning, Education); Theoretical Discussion; Footnotes (Few), Bibliography (None); No Abstract.

64:24.00

TITLE: "A Shorter Workweek: Is This the Answer?"
AUTHOR: John F. O'Donnell
PUBLISHER: In Charles Markham, *Jobs, Men and Machines: Problems of Automation*, New York, Praeger, 1964, pp.97-99.
KEY WORDS: Adjustments; Macro, Employment; Public Policy (Shorter Work Week, Public Representation in Bargaining); Descriptive (Ongoing Trends); Footnotes (None), Bibliography (None); No Abstract.

64:25.00

TITLE: "The Reversed Economic Impact of Automation"
AUTHOR: Edward L. Page
PUBLISHER: Advanced Management Journal, Vol. 29, November 1964, pp. 4-100.
KEY WORDS: Adjustments; General Equilibrium , Macro, Management Practices, Employment, Unemployment, Skill Requirements, Blue Collar-White Collar, Labor Mobility, Private-Public Relations; Private Policy (Planning, Attrition, Innovation Type, Job Content), Public Policy (Monetary, Policy, Fiscal Policy, Information); Empirical; Footnotes (None), Bibliography (None); Abstract.

ABSTRACT: Scope and Level -- A discussion of the manner in which the economic impact of automation is opposite to the impact of mechanization. Methodology -- An analysis of how automation differs from mechanization. The article further discusses the adverse impact of automation on the economy, by showing the effect on consumption, production and unemployment. Major Conclusion -- The leaders of American management should raise their sights from pure profitmindedness to serious consideration of the economic and social implications of their practices. Growth depends on changing management goals. If the full impact of automation is revealed by statistics it may be too late.

64:26.00

TITLE: "Some Neglected Areas of Research on the Effects of Automation and Other Technological Change on Workers"

AUTHOR: Norman G. Pauling

PUBLISHER: Journal of Business, Vol. 37, No. 3, July 1964, pp. 261-273.

KEY WORDS: Adjustments; Micro, Macro, Employment, Unemployment, Job Content, Work Relationships, Job Satisfaction, Skill Requirements; Private Policy (Retraining, Relocation, Union Jurisdiction, Apprenticeship), Public Policy (Manpower Programs, Relocation); Descriptive (Ongoing Trends, Future Trends); Footnotes (None), Bibliography (None); Abstract.

ABSTRACT: Scope and Level -- This paper suggests some areas of investigation relating to the effects of automation and technological change on workers in which the current state of knowledge seems to be deficient. Methodology -- A number of research possibilities are enumerated and discussed which suggest areas of research activity. Major Conclusion -- The author suggests many specific areas which need further research such as effects of automation on handicapped workers, women, young workers, older workers; effect on interpersonal relationships in the work environment; the effects of work changes on social and work attitudes; effects on worker organization; effects of changes in work requirements and job content; content of occupational training needed to adapt to change; effects of technological change on occupational prestige; advantages and disadvantages of relocation vs. retraining; the social and psychological effects of displacement on workers.

In general he concludes that studies should be more analytical than descriptive; variables should be more imaginatively and precisely defined; and, studies should be replicated to avoid conclusions based on individual case studies alone, without comparison with similar situations.

64:26.50

TITLE: "Methods for Evaluating the Effectiveness of Various Programs Designed to Deal with the Impact of Automation"
AUTHOR: Eric Pettersson
PUBLISHER: In International Labour Office, Labour and Automation, Bulletin #1, Automation: A Discussion of Research Methods, Geneva, International Labour Office, 1964, pp.208-223.
KEY WORDS: Adjustments; Macro, Sweden, Employment, Skill Requirements, Wage Effects, Labor Mobility; Public Policy (Information, Counseling, Manpower Programs, Relocation, Planning); Theoretical Discussion; Footnotes (None), Bibliography (None); No Abstract.

64:27.00

TITLE: Seminars on Private Adjustments to Automation and Technological Change
AUTHOR: President's Advisory Committee on Labor-Management Policy
PUBLISHER: Washington, U.S. Government Printing Office, 1964.
KEY WORDS: Adjustments; Micro, Management Practices, Government, Employment, Labor Mobility, Skill Requirements; Private Policy (Retraining, Relocation, Seniority, Severance Pay, Job Security, Attrition, Layoff Notification, Early Retirement, Vacations), Public Policy (Full Employment, Monetary Policy, Fiscal Policy, Public Representation in Bargaining, Education, Manpower Programs); Descriptive (Ongoing Trends, Future Trends); Footnotes (None); Bibliography (None); Abstract.

ABSTRACT: Scope and Level -- A transcript of seminars held at the University of Pennsylvania, the University of Chicago, and the University of California at Los Angeles on private adjustments to automation and technological change. Methodology -- Papers and addresses presented to the seminars by conferees from business, labor, and the public sectors are transcribed; discussions are included. Major Conclusion -- Private policies are limited to specific displacement problems. Government policies, such as full employment, monetary and fiscal policies are necessary to provide the setting for private adjustment.

A diversity of approaches is essential to successful adjustments. No one private method of adjustment to change is sufficient. Individual characteristics and circumstances must always be taken into account.

Several specific adjustment techniques were discussed at the seminars. Conclusions pertaining to some of them follow.

Relocation Allowances--Various factors which inhibit mobility were discussed, such as age, sex, ethnic considerations, inflexibility in the application of seniority arrangements, home and family ties, and the presence of severance pay. Simple granting of financial assistance may not be enough to induce mobility; other factors must be considered in each personal case.

Training and Retraining -- Training programs depend on the size of the firm. Retraining for a specific position is more effective than general training for occupational mobility in the labor market at large. General education for literacy should be undertaken by the public education system rather than by firms.

Advance Notice--Advance notice of automation is desirable and the longer the notice the better. If communication is good, advance notice can do much to eliminate displacement when the actual layoff occurs. One problem associated with a long notice period is that workers tend to disregard the warning. Constant and full communication is essential.

Attrition--Attrition was in general regarded favorably. However, firms differ in their ability to make use of it depending upon their usual worker turnover, age and sex of their labor force, and the skill mix necessary to maintain operations.

Early Retirement--Problems cited were the cost and the possibility of retired workers reentering the labor force. Benefits cited were faster attrition potential and consequent employment security given to the younger employee.

64:27.50

TITLE: "Managerial Functions in the Era of Automation"
AUTHOR: Julius Rezler
PUBLISHER: Advanced Management Journal, Vol. 29, No. 2, April 1964, pp. 57-65.
KEY WORDS: Adjustments; Micro, Management Practices, Labor Mobility, Education Requirements, Work Relationships, Labor-Management; Private Policy (Planning, Retraining, Job Security, Job Content, Seniority), Public Policy (Education, Information); Descriptive (Ongoing Trends); Footnotes (None), Bibliography (None); Abstract.
ABSTRACT: Scope and Level -- A limited examination of the changes caused by automation in managerial function, and a brief survey of the consequences of these changes for management as a group. Methodology -- An examination of the effects of automation based on general managerial functions, personnel management, and the organization of management. Major Conclusion -- Management is increasingly becoming subject to automation. The intensity of its impact depends on (1) the speed of introduction and (2) the limits to its application in the plant or the office. By examining the problems, advance planning, and proper timing, automation can be introduced with the least possible damage.

64:28.00

TITLE: "Technological Change, Management and Labour"
AUTHOR: Andrew Robertson
PUBLISHER: The Political Quarterly, Vol. 35, No. 2, April-June 1964, pp. 171-181.
KEY WORDS: Adjustments; Micro, Macro, Management Practices, Government, Great Britain, Employment; Private Policy (Shorter Work Week, Planning), Public Policy (Planning); Descriptive (Past Trends, Ongoing Trends); Footnotes (None), Bibliography (None); No Abstract.

467

64:29.00

TITLE: "The Fort Worth Project of the Armour Automation Committee"
AUTHOR: George P. Schultz and Arnold R. Weber
PUBLISHER: Monthly Labor Review, Vol. 87, No. 1, January 1964, pp. 53-57.
KEY WORDS: Adjustments; Micro, Meatpacking Industry, Armour and Company, Fort Worth, Texas, Case Study, Unemployment, Education Requirements, Blacks, Minority Group Workers, Older Workers, Younger Workers; Private Policy (Relocation, Retraining, Layoff Notification); Empirical (Tables, Case); Footnotes (None), Bibliography (None); Abstract.

ABSTRACT: Scope and Level -- A study of the special program initiated to help workers adjust to a meatpacking plant closure. Methodology -- Placement and retraining efforts are examined. Major Conclusions -- An attempt made to formalize the "grape vine" that develops among job seekers was fairly helpful in placement. The placement activities in general were only moderately successful which indicates the difficulties involved in finding jobs for workers with limited or nontransferable skills.

Retraining efforts were successful for some groups, particularly Latin American and Negro males. Older workers tend to face more unemployment than younger workers but retraining was helpful for reemployment of older workers. Racial discrimination was prevalent in Fort Worth and, combined with the generally low educational level, had a negative effect on reemployment.

64:30.00

TITLE: "Portable Pensions and Early Retirement: Are They Partial Solutions?"
AUTHOR: Martin E. Segal
PUBLISHER: In Charles Markham, Jobs, Men and Machines: Problems of Automation, New York, Praeger, 1964, pp. 72-75.
KEY WORDS: Adjustments; Micro, Employment, Unemployment, Fringe Benefits; Private Policy (Pension Rights, Early Retirement); Theoretical Discussion; Footnotes (None), Bibliography (None); Abstract.
ABSTRACT: Scope and Level -- A brief discussion of pension rights and early retirement provisions. Methodology -- Costs of pensions and early retirement and the need for portable pensions and additional funds to ensure an adequate income are discussed. Major Conclusions -- Technological displacement is causing some workers to lose pension rights because they are forced to leave an industry before retirement age. Early retirement plans are used as a partial solution in some industries but benefits are small and the cost of adequate provisions is prohibitive. Some form of portable pensions is needed so that a worker can take his pension rights with him to a new job should he be displaced. Additional funds are needed to supplement early retirement benefits until a worker is old enough to receive social security.

64:31.00

TITLE: "Automation and the State"
AUTHOR: Ben B. Seligman
PUBLISHER: Commentary, Vol. 37, No. 6, June 1964, pp. 49-54
KEY WORDS: Adjustments; Historical, Macro, Unemployment, Collective Bargaining, Skill Requirements, Labor Mobility, Labor-Management, Work Rules, Private-Public Relations, Job Content; Private Policy (Planning, Pension Rights, Job Security, Innovation Timing, S.U.B.), Public Policy (Fiscal Policy, Full Employment, Manpower Programs, Public Representation in Bargaining, Relocation, Legislation); Descriptive (Past Trends, Ongoing Trends); Footnotes (None), Bibliography (None); Abstract.
ABSTRACT: Scope and Level -- A discussion of the impact of technological change on the structure of employment and of the responsibility of the state to the displaced worker. Methodology -- The article presents a history of the effects of automation on jobs and what remedies the government has at its disposal to eliminate unemployment. The methods discussed include stimulating aggregate demand through fiscal measures and the use of manpower programs to retrain displaced workers. Major Conclusions -- The government should be preparing for the large number of nonworkers or displaced workers who will surface in the next decade. A variety of programs should be initiated to help facilitate change. These programs include public works, retraining technologically displaced workers and relocation.

64:32.50

TITLE: "Research Methodology in the Evaluation of Retraining Programs"
AUTHOR: Gerald G. Somers
PUBLISHER: In International Labour Office, Labour and Automation, Bulletin #1, Automation: A Discussion of Research Methods, Geneva, International Labour Office, 1964, pp. 187-207.
KEY WORDS: Adjustments; Micro, Macro, Employment, Unemployment, Skill Requirements, Job Security, Labor Mobility; Private Policy (Retraining, Relocation, Counseling), Public Policy (Relocation, Manpower Programs, Planning, Education); Descriptive (Past Trends, Ongoing Trends); Footnotes (Few), Bibliography (None); Abstract.
ABSTRACT: Scope and Level -- A discussion of various retraining programs and techniques used to evaluate them. Methodology -- Problem areas to be considered in the evaluation of retraining programs are listed, then, various techniques of evaluation that have been used, such as the Ford Foundation project for the evaluation of retraining in West Virginia, are described and commented upon. Major Conclusion-- In general, evaluation, of retraining programs has shown that definite improvements in labor market status have resulted for participants in retraining programs, but the evaluation techniques have not been precise enough to determine the exact cause of those improvements. They may result from greater youth, higher education level, counseling, or greater job placement efforts rather than from the training itself.

Research must be conducted on the recruitment, selection, and characteristics of the trainees. Research is also needed on methods of appraising the content and procedures of retraining. These investigations could help determine whether specific on-the-job training is, in general, more beneficial than general skill development or vice versa. Along with this, research into employer views on retraining and the relocation of retrainees is needed.

64:33.00

TITLE: Automation: Some of Its Effects on the Economy and Labor
AUTHOR: Bernard W. Stern, et.al.
PUBLISHER: Honolulu, University of Hawaii, Industrial Relations Center, September 1964.
KEY WORDS: Adjustments; General Equilibrium, Macro, Unions, Employment, Union-Management Powers, Private-Public Relations, Labor Mobility, Private Policy (Shorter Work Week, Work Sharing, Overtime, Innovation Type, Skill Requirements), Public Policy (Public Employment Programs, Fiscal Policy, Full Employment, Public Representation in Bargaining, Manpower Programs, Legislation); Descriptive (Ongoing Trends); Footnotes (None), Bibliography (Small); Abstract.

ABSTRACT: Scope and Level -- A discussion of the effects of automation on the economy. Methodology -- The discussion consists of three speeches made by union representatives at a meeting of the American Statistical Association. Major Conclusion -- The most serious effect of automation is the rapid rate of displacement of men by machines. But, the high rate of unemployment is just one result of automation. While unemployment climbs, automation has tended to increase profits by very large margins in automated industries. This increase in profit arises out of the cost-cutting that automation makes possible. Solutions to technological unemployment will require national planning for guarantees against layoffs.

64:34.00

TITLE: "How Arbitration Can Help"
AUTHOR: Donald B. Straus
PUBLISHER: In Charles Markham, Jobs, Men and Machines: Problems of Automation, New York, Praeger, 1964, pp.76-79.
KEY WORDS: Adjustments; Micro, Management Practices, Collective Bargaining; Theoretical Discussion; Footnotes (None), Bibliography (None); No Abstract.

64:34.25

TITLE: "Union with Tomorrow's Problems"
PUBLISHER: Business Week, Fabruary 17, 1964, p.98.
KEY WORDS: Adjustments; Micro, Unions, Communication Workers of America, Employment, Collective Bargaining, Union-Management Powers, Blue Collar-White Collar; Descriptive (Ongoing Trends); Footnotes (None), Bibliography (None); No Abstract.

64:34.50

TITLE: "Five Months After the Studebaker Shutdown"
AGENCY: U. S. Department of Labor
PUBLISHERS: Monthly Labor Review, Vol. 87, No. 8, August 1964, p. 899.
KEY WORDS: Adjustments; Micro, Studebaker, South Bend, Indiana, Unemployment; Private Policy (Retraining), Public Policy (Unemployment Compensation); Empirical (Tables, Case); Footnotes (None), Bibliography (None); Abstract.
ABSTRACT: Scope and Level — A study of the employees laid off from the Studebaker plant in South Bend, Indiana. Methodology — Results of a questionnaire sent to laid off employees are discussed. Major Conclusions — There is a need for much greater effort to alleviate long range suffering and hardship resulting from technological displacement. For many respondents, unemployment compensation was running out, health insurance had to be dropped, and the job retraining program was unable to take care of their need and desire for training.

64:35.00

TITLE: "Automation - The Greatest Threat"
AUTHOR: B.J. Widick
PUBLISHER: Part I in Labor Today, The Triumphs and Failures of Unionism in the United States, Boston, Houghton Mifflin, 1964.
KEY WORDS: Adjustments; Historical, Unions, Collective Bargaining, Blue Collar-White Collar, Union-Management Powers, Fringe Benefits, Wage Effects; Private Policy (Seniority, Relocation, Severance Pay, S.U.B., Shorter Work Week), Public Policy (Full Employment); Descriptive (Past Trends, Ongoing Trends), Footnotes (Moderate), Bibliography (None); No Abstract.

64:36.00

TITLE: "Training and Retraining: What Progress Has Been Made?"
AUTHOR: Seymour L. Wolfbein
PUBLISHER: In Charles Markham, Job, Men and Machines: Problems of Automation, New York, Praeger, 1964, pp. 80-87.
KEY WORDS: Adjustments; Historical, Unemployment; Public Policy (Manpower Programs); Descriptive (Ongoing Trends); Footnotes (None), Bibliography (None); Abstract.

ABSTRACT: Scope and Level — A description of the Manpower Development and Training Act and the progress it has made in training workers for new jobs. Methodology — The MDTA is described and its successes and problems are discussed. Major Conclusions — Although the MDTA has not been in existence long enough to evaluate accurately, it appears to be quite successful in its retraining efforts. Older workers are not adequately represented among those receiving training and something must be done to serve them. On-the-job training for a particular position is one aspect of the program which has met with great approval by employees and trainees alike.

63:1.00

TITLE: "The Impact of Technology on Labor Management Relations"
AUTHOR: Jack Barbash
PUBLISHER: Chapter 3 in Gerald Somers, et.al., Adjusting to Technological Change, New York, Harper and Row, 1963, pp. 44-60.
KEY WORDS: Adjustments; Micro, Unions, Employment, Collective Bargaining, Union-Management Powers, Management Practices; Private Policy (Job Security, Seniority, Relocation, Retraining, S.U.B., Shorter Work Week, Advance Notification), Public Policy (Public Representation in Bargaining, Legislation); Descriptive (Ongoing Trends, Projected Trends); Footnotes (Many), Bibliography (None); Abstract.

ABSTRACT: Scope and Level -- A study of union-management relations as affected by automation in industry. Methodology -A descriptive analysis of ongoing and projected future trends in collective bargaining and management-union reactions to technological impacts on jobs using several industrial examples. Major Conclusion -- Most sources of conflict in industrial relations today (1963) can be traced to technological change. Management strategy tends to enhance management rights. Union strategy tends to be more defensive, maintaining job security, worker's earnings, and union strength.

Union responses occur in three stages: (1) unions attempt to block or blunt the impact by maintaining existing jobs and earnings; (2) unions realize some change must occur so they shift to seeking measures to relieve displacement, e.g. wider seniority units, relocation allowances, and retraining; (3) demands that job loss and earnings be compensated for by supplemental unemployment benefits are made. Unions view their actions as micro level holding actions. The nationwide problem will have to be met by legislative action.

Technological change affects industrial harmony by: (1) causing "authorized" and wildcat strikes; (2) rank and file disagreement with union leaders in making "concessions"; (3) strike resistance of management increasing because of increased ability to build up inventories and maintain production; (4) workers possibly becoming more willing to yield due to fear of displacement; and (5) arbitration encompassing more areas of "management rights."

63:2.00

TITLE: "Automation and Technological Change" concluding statement of the Assembly
AGENCY: Batelle Memorial Institute
PUBLISHER: In Batelle-American Assembly, *Automation and Technological Change*, Columbus, Ohio, Batelle Memorial Institute, July 1963, pp. 4-8.
KEY WORDS: Adjustments: Macro, Skill Requirements, Private-Public Relations; Public Policy (Full Employment, Monetary Policy, Fiscal Policy, Urban-Regional Policy, Relocation, Public Representation in Bargaining, Manpower Programs, Planning, Education); Theoretical Discussion; Footnotes (None), Bibliography (None); No Abstract.

63:3.00

TITLE: "A Measure of Technological Employment"
AUTHOR: Murray Brown and John S. de Cani
PUBLISHER: The Review of Economics and Statistics, Vol. 45, November 1963, pp. 386-394.
KEY WORDS: Adjustments; General Equilibruim, Micro, Employment, Capital-Labor Ratio; Empirical (Tables, Regression); Footnotes (Many), Bibliography (Large); Abstract.
ABSTRACT: Scope and Level -- The article is a detailed discussion of a measurement of technological employment. This paper presents a method of measuring the forces of scale of output, relative prices of capital and labor, returns to scale, and neutral and non-neutral technology on employment changes. The forces are then tested for the private domestic non-farm sector of the United States for the period 1890-1958. The paper does this in such a way as to avoid the problem of the interaction of forces in a first-order approximation. Methodology -- This paper postulates as given a production function which yields a family of iso-product curves in the capital-labor plane, and equates the tangent of the iso-product curves to the iso-outlay lines to derive the demand for labor. Major Conclusion -- The major policy use of this study is to understand how much the variables must be changed in order to change employment. The results obtained from this study are useful in understanding the historical forces which impinge on changes in employment.

63:4.00

TITLE: Impact of Office Automation in the Internal Revenue Service, A Study of the Manpower Implications During the First Stages of the Changeover
AUTHOR: Bureau of Labor Statistics, U.S. Department of Labor, Bulletin No. 1364
PUBLISHER: Washington, U.S. Government Printing Office, 1963
KEY WORDS: Adjustments; Micro, Case Study, Internal Revenue Service, Atlanta, Georgia, Office Workers, Sociological and Psychological Effects, Employment, Skill Requirements, Job Security; Private Policy (Relocation, Retraining, Attrition, Early Retirement, Planning, Advance Notification); Empirical (Tables, Case); Footnotes (None), Bibliography (Small); Abstract.
ABSTRACT: Scope and Level -- A study of the manpower implications during the first stages of the changeover to automatic data processing in the Atlanta region of the Internal Revenue Service. Methodology -- Planning manpower changes, administering manpower policies, the impact on employees, retraining, relocation, and general manpower problems are examined. Major Conclusion -- The changeover, in its intermediate stages, appeared to be quite smooth with a minimum of displacements. Barriers to mobility, especially geographic relocation, were much greater than expected by the manpower planners.

The study suggests the importance of having a better understanding of the economic, social, and psychological factors that encourage and impede individuals in relocating and retraining.

63:5.00

TITLE: Industrial Retraining Programs for Technological Change, A Study of the Performance of Older Workers

AUTHOR: Bureau of Labor Statistics, U.S. Department of Labor, Bulletin No. 1368

PUBLISHER: Washington, U.S. Government Printing Office, 1963.

KEY WORDS: Adjustments; Micro, Older Workers, Case Studies, Skill Requirements; Private Policy (Retraining, Counseling, Advance Notification); Empirical (Tables, Cases); Footnotes (Few), Bibliography (Small), Abstract.

ABSTRACT: Scope and Level -- A study of the performance of older workers in industrial retraining programs resulting from technological change. Methodology -- The performance of workers in specific training programs in several industries is examined with special emphasis on older workers. Major Conclusion -- The findings of the study imply that age is not a reliable or useful criterion for determining the suitability of workers for retraining. Counseling in advance of training would assist the needs of the trainees. The study reaffirms the importance of appraising a worker's adaptability on the basis of individual aptitudes and capacity rather than on that of chronological age.

Additional research is called for in the area of programmed learning. The ability of the trainee to control his own learning pace is also considered worthy of future investigation. Wider dissemination of knowledge about the ability of older persons to learn and to be retrained should contribute to an easier adjustment to technological change.

63:5.50

TITLE: "A Study of the Economic and Social Impact of Automation Upon Management and Personnel in Business Offices in Memphis, Tennessee"
AUTHOR: Eugene Henry Fox
PUBLISHER: Unpublished PhD Dissertation, University of Alabama, 1963.
KEY WORDS: Adjustments; Micro, Office Workers, White Collar Workers Management Practices, Memphis, Tennessee, Skill Requirements; Private Policy (Planning); Descriptive (Ongoing Trends); Empirical (Sample); Footnotes (Moderate), Bibliography (Moderate); Abstract.

ABSTRACT: Scope and Level -- A brief discussion of the observed economic and social effects on management and personnel as office automation is introduced. Methodology -- The dissertation is both empirical and descriptive. It covers a five year period of office automation in selected business offices in Memphis, Tennessee. Major Conclusion -- Office automation reduced needs for workers in routine clerical jobs and intensified needs for more highly skilled workers. Offices are adopting automation primarily to curtail both rapidly rising paper work costs and increased personnel needs. Difficulty arises in realizing the fuller use of the machines for areas of administrative planning and cost-control.

63:6.00

TITLE: "Labor Mobility, Resource Allocation, and Structural Unemployment"
AUTHOR: Lowell E. Gallaway
PUBLISHER: American Economic Review, Vol. 53, September 1963, pp. 694-716.
KEY WORDS: Adjustments; General Equilibrium, Labor Market, Unemployment, Structural Unemployment, Frictional Unemployment, Public-Private Relations, Labor Mobility, Opportunity Cost, Wage Effects; Public Policy (Relocation, Urban-Regional Policy); Descriptive (Ongoing Trends), Empirical (Tables, Regression), Footnotes (Many), Bibliography (Large); Abstract.

ABSTRACT: Scope and Level -- A discussion of the labor market mechanism and its impact on labor mobility, resource allocation, and structural unemployment. Methodology -- Knowledge of the extent to which the labor market mechanism either succeeds or fails as an allocative device at the monetary, fiscal level is significant from a policy standpoint. This paper is an attempt to provide insight into the question of the success or failure of the labor market as an allocative device. An empirical evaluation of the effectiveness of the labor market as an intrafactor allocative mechanism is made. Major Conclusion -- Three major conclusions emerge from this paper: (1) The labor market is a reasonably efficient allocator of labor between regional sectors of that market; (2) There are apparently barriers to the mobility of workers between occupation and industries that are not strictly the product of the opportunity costs associated with such transfers, and (3) the structural unemployment explanation for the high unemployment of the early sixties is not valid.

Collectively, these conclusions present a somewhat varied picture. In some respects the labor market appears to perform more effectively than is generally believed in its ability to allocate resources effectively. On the other hand, its over-all performance as an efficient allocator of resources on an industrial and occupation basis is far from distinquished.

63:6.50

TITLE: The Impact of Technological Change -- The American Experience
AUTHOR: William Haber, Louis Ferman, and James Hudson
PUBLISHER: Kalamazoo, Michigan, The W.E. Upjohn Institute for Employment Research, 1963.
KEY WORDS: Adjustments; Historical, Micro, Case Studies, Eastern U.S., North Central U.S., Employment, Unemployment; Private Policy (Relocation, Counseling, Manpower Programs, Vocational Education); Descriptive (Past Trends, Ongoing Trends); Footnotes (Moderate), Bibliography (Medium); Abstract.
ABSTRACT: Scope and Level -- A consideration of the ability of our economic system to absorb large numbers of workers displaced by technological change or plant shutdowns. Case studies for the dynamics of job displacement in the last two decades of technological change are examined. Four major problem areas are considered: (1) the factors affecting reemployment of displaced workers, (2) the process of finding a job, (3) the mobility of displaced workers and (4) the economic and noneconomic consequences of job displacement. Methodology -- A comparative investigation of job displacement for the U.S. between 1929-61 using 17 case studies. Major Conclusion -- The author classifies technological change into 6 types. The long run effects are beneficial and necessary to the economic progress of the nation, however, the short run effect is job displacement. Attention must be placed on this displacement. A series of tailormade programs for training, retraining, vocational guidance and counseling must be developed.

63:7.00

TITLE: "Effects of Automation on the Position of Negroes in a Southern Industrial Plant"

AUTHOR: Joe W. Hart

PUBLISHER: Journal of Human Relations, Vol. 12, No. 3, December 1963, pp. 419-421.

KEY WORDS: Adjustments; Micro, Unions, Blacks, Union-Management Powers, Low Skill, High Skill, Unemployment, Labor Mobility, Work Rules, Work Relationships; Private Policy (Planning, Retraining, Seniority, Attrition, Job Security, Labor-Management Cooperation, Job Content), Public Policy (Public Employment Programs, Public Representation in Bargaining); Empirical (Cases), Descriptive (Ongoing Trends); Footnotes (None), Bibliography (None); No Abstract.

63:8.00

TITLE: Old Before Its Time: Collective Bargaining at 28
AUTHOR: Paul Jacobs
PUBLISHER: Santa Barbara, California, Center for the Study of Democratic Institutions, 1963.
KEY WORDS: Adjustments; Micro, Macro, Unions, Government, Employment, Unemployment, Collective Bargaining, Blue Collar-White Collar; Private Policy (Relocation, Retraining); Descriptive (Ongoing Trends, Projected Trends); Footnotes (None), Bibliography (None); No Abstract.

63:9.00

TITLE: "Cooperative Approaches to Problems of Technological Change"
AUTHOR: Charles C. Killingsworth
PUBLISHER: Chapter 4 in Gerald Somers, et. al., Adjusting to Technological Change, New York, Harper and Row, 1963, pp. 61-94.
KEY WORDS: Adjustments; Micro, Unions, Automobile Industry, Rubber Industry, Steel Industry, Longshoremen, Railroad Industry, Collective Bargaining, Union-Management Powers, Job Security, Work Rules, Fringe Benefits, Work Relationships; Private Policy (Seniority, Relocation, Retraining, Severance Pay, Work Rules, S.U.B., G.A.W., Attrition, Early Retirement, Shorter Work Week, Paygrades, Work Sharing, Job Content, Mediator, Layoff Notification), Public Policy (Public Representation in Bargaining); Descriptive (Past Trends, Ongoing Trends); Footnotes (Many), Bibliography (None); Abstract.

ABSTRACT: Scope and Level -- Five case studies in union-management reactions to change are analysed. Methodology -- The interactions between the work environment and the method of accommodation to technological change are explored. Major Conclusion - Technological change has been a major factor in effecting changes in union demands for job security and management desires for flexibility and efficiency. Unions have secured job security provisions by methods which do not impair managerial flexibility and vice versa. When this reality is ignored harsh conflicts result.

Except in the skilled trades, few work rules exist in the automobile and rubber industries. Most jobs require few skills and much job flexibility exists so these unions have sought other approaches to job securities. In autos, production standards are jointly bargained and measures to cushion displacements have evolved, e.g., wider seniority, work-sharing, S.U.B. plans, early retirement and interplant transfer. Skill trades in autos are still protected by work rules.

Until the late 1950's basic reactions in the rubber industry included wildcat strikes and organized slowdowns. But as industry countered by building completely new modernized plants and letting old plants suffer, unions accepted change in return for S.U.B. plans, better severance pay, work-sharing and wider seniority systems.

In 1959-60, a record length strike occurred in steel as a result of labor-management disagreements over work rules. The strike ended without any real changes. However, in 1962 a settlement was reached, largely due to the results of a labor-management committee set up in 1960, which liberalized the S.U.B. plan, set up relocation allowances, widened seniority units, set up early retirement and guaranteed 32 hours per week of pay.

The West Coast Longshoremen went from a very restrictive work rules system in 1961 to an early retirement and G.A.W. system with protection against speed up and unsafe operations. Railroad crews' work rules in 1960 were much the same as those in 1920. A public-labor-management committee recommended much more managerial flexibility concerning work rules in return for a S.U.B. plan, retraining, severance pay and wider seniority units and hiring pools. As of 1962 no action on the proposals had resulted.

63:10.00

TITLE: "Technological Change and the Community"
AUTHOR: Sar A. Levitan and Harold L. Sheppard
PUBLISHER: Chapter 7 in Gerald Somers, et.al., Adjusting to Technological Change, New York, Harper and Row, 1963, pp. 159-189.
KEY WORDS: Adjustments; Macro, Unemployment, Skill Requirements; Public Policy (Full Employment, Urban-Regional Policy, Public Employment Programs, Manpower Programs, Planning); Descriptive (Past Trends, Ongoing Trends, Future Trends); Footnotes (Moderate), Bibliography (None); No Abstract.

63:11.00

TITLE: "The Challenge of Cybernation"
AUTHOR: Donald N. Michael
PUBLISHER: In Batelle-American Assembly, Automation and Technological Change, Columbus, Ohio, Batelle Memorial Institute, July 1963, pp. 23-29.
KEY WORDS: Adjustments; Macro, Leisure, Women, Employment, Hours of Work, Skill Requirements; Public Policy (Manpower Programs, Planning, Education); Theoretical Discussion; Footnotes (Few), Bibliography (None); No Abstract.

63:12.00

TITLE: "Meany Warns of 'Curse' of Automation"
AUTHOR: Paul Miller
PUBLISHER: AFL-CIO News, Vol.8, No. 46, November 16, 1963, pp.1, 16.
KEY WORDS: Adjustments; Macro, Unions, Government, Employment, Unemployment, Collective Bargaining; Public Policy (Shorter Work Week, Minimum Wages, Fiscal Policy); Descriptive (Ongoing Trends); Footnotes (None), Bibliography (None); Abstract.

ABSTRACT: Scope and Level -- A newspaper story covering George Meany's keynote address to the AFL - CIO's 5th convention in New York in 1963. Methodology -- The high points of Meany's speech are reported. Major Conclusion -- Meany warned that automation is a problem which is "becoming a real curse in this society." He advocated a 35 hour work week, or less, a higher minimum wage, jobs, tax relief, and increased government spending for public facilities.

63:13.00

TITLE: Research and Training Activities under the Manpower Development and Training Act
AGENCY: Office of Manpower, Automation and Training, U.S. Department of Labor
PUBLISHER: Washington, U.S. Government Printing Office, February 1963.
KEY WORDS: Adjustments; Unemployment, Labor Mobility; Public Policy (Urban-Regional Policy, Manpower Programs, Relocation); Descriptive (Ongoing Trends, Projected Trends, Tables); Footnotes (None), Bibliography (None); No Abstract.

63:14.00

TITLE: "Policy Implications of Technological Change in Western Europe"
AUTHOR: Bertil Olsson
PUBLISHER: Chapter 8 in Gerald Somers, et.al., Adjusting to Technological Change, New York, Harper and Row, 1963, pp. 190-205.
KEY WORDS: Adjustments; Macro, Western Europe, Employment, Skill Requirements; Private Policy (Retraining, Relocation), Public Policy (Full Employment, Information, Counseling, Relocation, Manpower Programs, Planning); Descriptive (Ongoing Trends, Future Trends); Footnotes (Few), Bibliography (None); No Abstract.

63:15.00

TITLE: "The Obsolescent Unions"
AUTHOR: A.H. Raskin
PUBLISHER: *Commentary*, Vol. 36, No. 1, July 1963, pp. 18-25.
KEY WORDS: Adjustments; Historical, General Equilibrium, Macro, Unions, Collective Bargaining, Strike Effectiveness, Job Security, Labor-Management Cooperation, Work Rules, Blue Collar-White Collar, Private-Public Relations; Private Policy (Retraining, Transfer Options, Severance Pay, Layoff Notification, Shorter Work Week), Public Policy (Manpower Forecasting, Manpower Programs); Descriptive (Past Trends, Ongoing Trends, Future Trends); Footnotes (None), Bibliography (None); No Abstract.

63:15.50

TITLE: "Automation - End or a New Day in Unionism?"
AUTHOR: James L. Stern
PUBLISHER: The Annals of the American Academy of Political and Social Science, Vol. 350, November 1963, pp. 25-35.
KEY WORDS: Adjustments; Historical, Unions, Collective Bargaining, Strike Effectiveness, Occupational Structure, Union-Management Powers, Job Satisfaction, Work Relationships, Working Conditions, Job Security, Wage Effects; Private Policy (White Collar Unionization); Descriptive (Ongoing Trends, Future Trends); Footnotes (Few), Bibliography (None); Abstract.
ABSTRACT: Scope and Level -- A discussion of effects of automation on trade unions. Methodology -- Ways in which automation is affecting unionism, mostly negative, are described. Major Conclusion -- Automation adversely affects unions by changing the nature of work and reducin the solidarity of the work group. Strikes are more difficult to conduct because non-union personnel are able to keep the plant operating. Organizational efforts are retarded by changes in the work force and occupational structure.

However, none of the problems presented for unions by automation are insurmountable. A reorientation of union programs and functions in line with the changes in work, in occupational characteristics, and in the backgrounds and attitudes of young potential new members is possible and needed.

TITLE: "Organized Labor and Technical Change: A Backward Look"
AUTHOR: Phillip Taft
PUBLISHER: Chapter 2 in Gerald Somers, et. al., Adjusting to Technological Change, New York, Harper and Row, 1963, pp. 27-43.
KEY WORDS: Adjustments; Historical, Micro, Unions, Blue Collar, Skilled Workers, Collective Bargaining, Employment, Skill Requirements, Labor Mobility, Work Rules, Union-Management Powers; Private Policy (Labor-Management Cooperation, Seniority, Relocation, Retraining, Severance Pay, Job Security, Shorter Work Week, Skill Requirements); Review of the Literature, Descriptive (Past Trends); Footnotes (Moderate), Bibliography (None); Abstract.

ABSTRACT: Scope and Level -- A discussion of worker, union, and management response to technological changes in late 1800's and early 1900's (into the 1930's) citing many case studies from different industries. Methodology -- The article is basically a review of past trends and examples, drawing on many other sources. Major Conclusion -- Technological change does not lead to increased unemployment in the long run but, as recognized by many unions, it can cause several welfare problems in the short run to those workers displaced by the change. This group should not be made to suffer while society as a whole benefits, thus the displaced workers should receive compensation.

Skilled workers often saw change as eliminating their jobs and lowering the well being of labor thus they often attempted to stop or delay changes in production methods. Scientific management practices in the early stages did much to enhance this feeling among skilled workers. However, the official AFL position was not to block change but to seek shorter working hours.

After World War I a trend toward more union-management cooperation developed. This meant recognizing labor as a partner in shop decisions on efficiency and production methods. During the 1920's and 1930's several dismissal compensation and relocation schemes were introduced. Also broader seniority units were advocated. Dismissal pay helps ease the burden for the displaced worker who is not a risk taker in our system and is to be treated as a cost of business.

63:17.00

TITLE: Free Men and Free Markets
AUTHOR: Robert Theobald
PUBLISHER: New York, Clarkson N. Potter, 1963.
KEY WORDS: Adjustments; General Equilibrium, Unions, Employment, Unemployment, Blue Collar-White Collar, Fringe Benefits, Leisure; Private Policy (Retraining, G.A.W., Attrition, Shorter Work Week), Public Policy (Full Employment, Fiscal Policy, Monetary Policy, Income Maintenance); Theoretical Discussion; Footnotes (None), Bibliography (None); Abstract.

ABSTRACT: Scope and Level -- The author presents a theory for coping with increasing abundance while preserving free men and free markets. Methodology -- A theory of income maintenance is proposed, following a discussion of abundance in the American economy and the inequities this abundance is perpetrating. Major Conclusions -- The author proposes an income maintenance plan to compensate for unemployment as a result of cybernation. The plan, which he calls the Economic Security Plan, consists of two parts: (1) Basic Economic Security (BES) which is a guarantee of an income adequate for human dignity to every member of society through payments from the federal government, and (2) Committed Spending (CS) which is a guarantee of payments from the federad government to prevent abrupt declines in middle-level income following elimination of jobs by cybernation. He theorizes that our existing economic system is outmoded by abundance. He proposes the establishment of new principles specifically designed to break the link between jobs and income. A basis of distribution of income which is nottied to work as a measure must be developed because the employment market will decline significantly and jobs will not be available for many who are willing and able to work.

63:18.00

TITLE: "The Interplant Transfer of Displaced Employees"
AUTHOR: Arnold R. Weber
PUBLISHER: Chapter 5 in Gerald Somers, et. al., Adjusting to Technological Change, New York, Harper and Row, 1963, pp. 95-143.
KEY WORDS: Adustments; Micro, Unions, Employment, Collective Bargaining, Job Security, Fringe Benefits; Private Policy (Seniority, Relocation, Retraining, Severance Pay, Attrition, Early Retirement, Pension Rights, S.U.B., Skill Requirements, Transfer Options); Empirical (Cases); Footnotes (Few), Bibliography (None); Abstract.

ABSTRACT: Scope and Level -- An analysis of union-management programs for the interplant transfer of displaced employees within multiplant firms. Methodology -- The sequence of issues which arises during the implementation of a comprehensive program for interplant transfers is examined. Major Conclusions -- Workers are most likely to exercise interplant transfer rights between two plants within the same labor market than they are between plants in widely separated market areas. Distance between plants and the disposition of seniority rights are both important factors in the effectiveness of interplant transfer systems.

In the cases studied, few workers chose the transfer option. Nevertheless, it provided an added dimension to adjustment techniques and was favorably received by those who did exercise the option. Interplant transfer systems require planning and continuing attention throughout the process to be an effective method of adjustment.

63:18.50

TITLE: "Where Bargaining Fails"
PUBLISHER: The Nation, Vol. 196, January 5, 1963, p.2.
KEY WORDS: Adjustments; Micro, Unions, Printing Industry, Employment, Union-Management Powers, Skill Requirements, Job Security, Work Rules, Collective Bargaining; Private Policy (Planning, Innovation Type); Descriptive (Ongoing Trends, Cases); Footnotes (None), Bibliography (None); No Abstract.

53:19.00

TITLE: "The Armour Experience: A Case Study in Plant Shutdown"
AUTHOR: Edwin Young
PUBLISHER: Chapter 6 in Gerald Somers, et. al., *Adjusting to Technological Change*, New York, Harper and Row, 1963, pp. 144-158
KEY WORDS: Adjustments; Micro, Meatpacking Industry, Armour and Company, Oklahoma City, Oklahoma, Unemployment, Collective Bargaining; Private Policy (Seniority, Relocation, Retraining, Severance Pay, Counseling, Labor-Management Cooperation, Advance Notification, Placement Service, Planning), Public Policy (Information, Counseling, Manpower Programs, Education); Empirical (Tables, Cases); Footnotes (Few), Bibliography (None); Abstract.

ABSTRACT: Scope and Level -- A study of the effect on the workers of an Armour and Company plant closure in Oklahoma City. Methodology -- Interviews with workers were used to assess their opinions of retraining and counseling efforts conducted by the company and the Oklahoma Employment Service. Major Conclusions -- Careful advance planning by the company and Employment Service to assess needs is essential for successful adjustment and cannot be replaced by a crash program. When unemployment is rising in the geographic area, no amount of promotion will produce significant numbers of jobs for displaced workers. A carefully planned, continuing education program for workers, sponsored by the union and management, would help employees develop skills and abilities to improve their position in the labor market in times of crisis. Crash retraining programs for middle-aged workers with limited educational background are not very effective.

Pretermination counseling, carried on by a trained and experienced person, would do much for the morale and general welfare of the displaced workers, even if it made little difference to their chances in the immediate labor market.

62:0.50

TITLE: "The Impact of Scientific Management and Automation in the American Labor Force"

AUTHOR: Mohamed Salah El-Din El-Shanawani

PUBLISHER: Unpublished Ph.D. Dissertation, Madison, University of Wisconsin, 1962.

KEY WORDS: Adjustments; Historical, Macro, Skill Requirements, Job Content, Wage Effects, Sociological and Psychological Effects; Descriptive (Past Trends, Ongoing Trends); Footnotes (Moderate), Bibliography (Moderate); Abstract.

ABSTRACT: Scope and Level -- An investigation of changes in the position of the industrial worker relative to the machine as technological developments take place. Methodology -- A discussion of the two stages in technological change - scientific management and automation. Major Conclusions - Scientific management focuses on the worker rationalizing his movements and requiring him to act almost as a machine. It minimizes the need for skilled labor, however, psychological problems are created. Automation dispenses with physical skills but stresses perceptual and conceptual ones. It enlarges jobs, thus making them more responsible and meaningful. Skill, wages and prestige are upgraded but workers fear technological unemployment. Automation will, in the long run, raise the standard of living of the working class. Now we must concern ourselves with the short run effects of automation.

62:1.00

TITLE: "Automation and the Employee"
AUTHOR: William A. Faunce, Einar Hardin, and Eugene H. Jacobson
PUBLISHER: The Annals of the American Academy of Political and Social Science, Vol. 340, March 1962.
KEY WORDS: Adjustments; Micro, Insurance Industry, Automobile Industry, Steel Industry, Public Utilities, Case Studies, Unskilled Workers, Semi-Skilled Workers, Skilled Workers, Employment, Unemployment, Job Satisfaction, Skill Requirements, Earnings, Promotion Opportunities, Work Relationships, Hours of Work; Private Policy (Retraining, Planning, Labor-Management Cooperation, Paygrades, Job Security, Job Content, Skill Requirements); Review of the Literature, Empirical (Cases), Descriptive (Ongoing Trends, Futurist Views); Footnotes (Moderate), Bibliography (None); Abstract.

ABSTRACT: Scope and Level -- A micro study of the socio-economic effects of office and factory automation. The emphasis is on two categories of effects: intrinsic (job satisfaction for different reasons) and contextual (pay, promotions, etc.). Methodology -- A descriptive study relying on previous case studies of the introduction of automation in offices and factories both by th authors and others. Major Conclusion -- The impact of office automation upon job satisfaction varies depending on whether intrinsic or contextual aspects of the job are affected. Office employees perceive automation as eliminating jobs, yet often welcome change. Managerial ability is a significant factor in employee receptiveness to automation.

Factory workers prefer automated to less-advanced plants, although dissatisfaction is experienced with the introduction of automation.

Automation may affect the significance of work in our society by changing job content, shifting job opportunities towards high-skilled employees, or decreasing working hours. Its effect will probably be a decrease in the importance of work and a continuation of the trend toward a leisure-oriented society.

62:2.00

TITLE: "Dead Horse and the Featherbird: The Spector of Useless Work"
AUTHOR: Paul Jacobs
PUBLISHER: Harper's Magazine, September 1962.
KEY WORDS: Adjustments; Historical, Micro, Publishing Industry, Airline Industry, Employment, Unemployment, Collective Bargaining, Unions, Private-Public Relations, Work Rules, Hours of Work Fringe Benefits, Wage Effects, Job Satisfaction; Private Policy (Retraining, Planning, Work Rules, Pension Rights, G.A.W., Labor-Management Cooperation, Layoff Notification, Shorter Work Week, Paygrades, Job Security, Work Sharing, Multicraft Union, Mediator), Public Policy (Full Employment, Fiscal Policy, Manpower Programs, Shorter Work Week, Unemployment Compensation, Income Maintenance); Descriptive (Past Trends, Ongoing Trends, Futurist Views); Footnotes (None), Bibliography (None); No Abstract.

61:1.00

TITLE: "Work Rules and Practices in Mass Production Industries"
AUTHOR: Jack Stieber
PUBLISHER: Proceedings of the Fourteenth Annual Meeting of the Industrial Relations Research Association, December, 1961.
KEY WORDS: Adjustments; Historical, Micro, Manufacturing, Automobile Industry, Steel Industry, Aerospace Industry, Rubber Industry, Meatpacking Industry, Electronics Industry, Glass Industry, Case Studies, Employment, Collective Bargaining, Labor-Management, Skill Requirements, Work Rules, Work Time, Hours of Work, Fringe Benefits; Private Policy (Seniority, Relocation, Retraining, Planning, Early Retirement, Work Rules, S.U.B., Severance Pay, Labor-Management Cooperation, Shorter Work Week, G.A.W., Job Security, Work Sharing, Layoff Notification, Innovation Timing, Job Content, Overtime, Skill Requirements, Mediator, Automation Fund); Empirical (Cases), Descriptive (Past Trends, Ongoing Trends); Footnotes (Moderate), Bibliography (None) Abstract.

ABSTRACT: Scope and Level -- A survey of labor-maaagement response to technological change in the form of work rules and practices in selected manufacturing industries in the 1947-1960 period. Emphasis is given to the role of arbitration and the receptiveness of unions to change in the industries studied, particulary with respect to the lower skill levels. Methodology -- A descriptive analysis relying on industry case studies, as well as government reports and statistics. Major Conclusions -- The mass production industries are relatively free of restrictive rules and practices inhibiting technological change. The only types of restriction found to exist with any degree of frequency in these industries were the enforcement of loose production standards or limits on speed or output.

Mass production industries have been among those encountering the least union resistance to automation and technological change. The emphasis has been on cushioning the impact of change through financial assistance and other benefits, including early retirement, severance pay, SUB, retraining, relocation, guaranteed pay and employment, and shorter work weeks.